

THE
ELEMENTS
OF
ARCHITECTURE,

Collected by
HENRY WOTTON K^c,

From the
BEST AUTHOURS
AND
EXAMPLES



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THE
ELEMENTS
OF
ARCHITECTURE

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Reliquiæ Wottonianæ.

O R,
A COLLECTION

of { L I V E S,
L E T T E R S,
P O E M S;

With
C H A R A C T E R S
O F
Sundry P E R S O N A G E S :

And other
I n c o m p a r a b l e P I E C E S
o f *Language and Art.*

By The curious P E N S I L of
the Ever Memorable
S^r *Henry Wotton* K^t
Late,
Provost of *Eton Colledg.*

L O N D O N,
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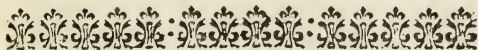
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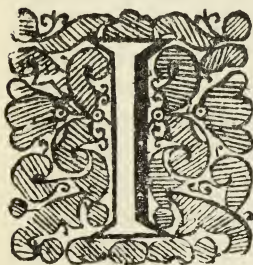
THE
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T H E P R E F A C E.



I Shall not need (like the most part of Writers) to celebrate the Subject which I deliver; In that point I am at ease. For Architecture can want no commendation, where there are Noble-Men, or Noble Mindes; I will therefore spend this Preface, rather about those from whom I have gathered my knowledge: For I am but a gatherer and disposer of other mens stuffe; at my best value.

Our principall Master is Vitruvius, and so I shall often call him; who had this felicity, that he wrote when the Roman Empire was neer the pitch; Or at least, when Augustus (who favoured his endeavours) had some meaning (if he

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Tacit. lib. 1. *were not mistaken*) to bound
Annal. *the Monarchie: This, I say,*
was his good hap; For in growing and
enlarging times, Arts are commonly
drowned in Action: But on the other
side, it was in truth an unhappinesse, to
expresse himselfe so ill, especially writing
(as hee did) in a season of the ablest
Pennes; And his obscurity had this
strange fortune; That though he were
best practised, and best followed by his
own Country-men; yet after the revi-
ving and repolishing of good Literature,
(which the combustions and tumults of
the middle-Age had uncivillized) hee
was best, or at least, first understood by
Strangers: For of the Italians that took
him in hand those that were Grammari-
ans seeme to have wanted Mathematicall
knowledge; and the Mathematicians per-
haps wanted Grammer: til both were suf-
ficiently conjoynd, in Leon-Batista Al-
berti the Florentine, whom I repute the
first learned Architect beyond the Alpes;
But he studied more indeed to make him-
selfe an Author, then to illustrate his
Master. Therefore amongst his Com-
menters, I must (for my private con-
ceite)

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ceite) yeeld the cheife praise unto the French, in Philander; and to the high Germans, in Gualterus Rivius who besides his notes, hath likewise published the most elaborate Translation, that I think is extant in any vulgar Speech of the world: though not without bewayling, now and then, some defect of Artificiall terms in his own; as I must likewise: For if the Saxon, (our mother tongue) did complaine; as justly (I doubt) in this point may the Daughter: Languages, for the most part, in terms of Art and Erudition, retaining their originall poverty, and rather growing rich and abundant in complementall phrases and such froth. Touching divers moderne men that have written out of meere practise. I shall give them their due upon occasion.

And now, after this short Censure of others, I would fain satisfie an Objection or two, which seem to lie somewhat heavily upon my self; It will be said, That I handle an Art, no way suteable either to my Employments, or to my Fortune. And so I shall stand charged, both with Intrusion, and with Impertinency.

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*To the First I answer, That though by the ever acknowledged goodnesse of my most deare and gracious S O V E R A I G N E; and by his long indulgent tolerations of my defects, I have born abroad some part of his civil Service; yet when I came home, and was again resolved into mine own simplicity, I found it fitter for my Penne (at least in this first publique adventure) to deale with these plain Compilements, and tractable Materials; then with the Laberynth and Mysteries of Courts and States; And lesse presumption for me, who have long contemplated a famous Republique, to write now of Architecture; then it was anciently for *Hippodamus the Milesian, to write of Republiques, who was himself but an Architect.*

* Aristot. 2.
lib. Politi.
cap. 6.

To the Second, I must shrink up my shoulders, as I have learn'd abroad, and confesse indeed, that my fortune is very unable to exemplifie and actuate my Speculations in this Art, which yet in truth, made me the rather even from my very disability, take encouragement to hope, that my present Labour would
inde


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finde the more favour in others, since it was undertaken for no mans sake lesse then mine owne. And with that confidence, I fell into these thoughts; Of which, there were two wayes to be delivered; The one Historicall, by description of the principall Works, performed already in good part by Giorgio Vassari in the lives of Architects. The other Logickall, by casting the rules and cautions of this Art into some comfortable Method: whereof I have made choice, not only as the shortest and most Elementall; but indeed as the soundest. For though in practickall knowledges, every compleat Example may beare the credit of a Rule; yet peradventure Rules should precede, that we may by them be made fit to judge of Examples: Therefore to the purpose; for I will preface no longer,



O F
THE ELEMENTS
O F
ARCHITECTURE.

The First Part.

 **I** *N Architecture as in all other Operative Arts, the End must direct the Operation.*

The *End* is to build well.

Wel-building hath three Conditions, *Commodity, Firmnesse, and Delight:*

A common Division among the Deliverers of this *Art*, though I know

I 5 not

not how, somewhat misplaced by *Vitruvius* himself, *lib. 1. cap. 3.* whom I shall be willinger to follow as a Master of *Proportion*, then of *Method*.

Now, For the attaining of these *Intentions*, we may consider the whole *Subject* under two generall Heads;

The *Seat*, and the *Work*.

Therefore first touching *Situation*.

The *Precepts* thereunto belonging do either concern the *Totall Posture*, (as I may term it) or the *Placing* of the *Parts*: whereof the first sort, howsoever usually set down by *Architects* as a piece of their *Profession*, yet are in truth borrowed from other *Learnings*: there being between *Arts* and *Sciences*, as well as between *Men*, a kind of good fellowship, and communication of their *Principles*.

For you shall find some of them to be meerly *Physicall*, touching the quality and temper of the *Aire*: which being a perpetuall ambient and ingredient, and the defects thereof incorrigible in single *Habitations* (which I most intend) doth in those respects require the more exquisite caution; That
it

it be not too *grosse*, nor too *penetrative*; Not subject to any foggie noysomnesse, from *Fens* or *Marshes* near adjoining; nor to *Minerall* Exhalations from the Soil it self. Not undigested, for want of *Sun*; Not unexercised, for want of *Wind*: which were to live (as it were) in a *Lake*, or standing *Pool* of *Aire*, as *Alberti* the *Florentin Architect* doth ingeniously compare it.

Some do rather seem a little *Astrologically*, as when they warn us from Places of malign *Influence*: where *Earth-quakes*, *Contagions*, *Prodigious Births*, or the like, are frequent without any evident cause: whereof the Consideration is peradventure not altogether vain: Some are plainly *Oeconomically*; As that the *Seat* be well watered, and well fuelled; That it be not of too sleepy and incommodious *Acceſſe*, to the trouble both of *Friends* and *Family*; That it lie not too far from some navigable *River* or *Arme* of the *Sea*, for more ease of provision, and such other *Domestick* notes.

Some again may be said to be *Optical*:

cal: Such I mean as concern the *Properties* of a well chosen *Prospect*: which I will call the *Royalty* of *Sight*. For as there is a *Lordship* (as it were) of the *Feet*, wherein the Master doth much joy when he walketh about the *Line* of his own *Possessions*: So there is a *Lordship* likewise of the *Eye*, which being a Ranging, and Imperious, and (I might say) an *Usurping Sense*, can indure no narrow *Circumscription*; but must be fed both with extent and variety. Yet on the other side, I find vaste and indefinite views which drown all apprehension of the uttermost *Objects*, condemned by good Authours, as if thereby some part of the pleasure (whereof we speak) did perish. Lastly, I remember a private *Caution*, which I know not well how to fort, unlesse I should call it *Politically*: By no means, to build too near a great *Neighbour*; which were, in truth, to be as unfortunately seated on the earth, as *Mercury* is in the Heavens, for the most part, ever in *combustion* or *obscurity* under brighter beams then his own.

From these severall *Knowledges*, as I
have

have said, and perhaps from. * Joannes
 some other, do *Architects* Heurnius In-
 stit. Medicin.
 lib. 7. cap. 2.
 derive their Doctrine about
 Election of *Seats*: wherein I
 have not been so severe as a * great Scho-
 ler of our time, who precisely restrain-
 eth a perfect *Situation*, at least for
 the main point of health, *Ad locum
 contra quem Sol radios suos fundit cum
 sub Ariete oritur*; That is, in a word,
 he would have the first *Salutation* of
 the *Spring*. But such *Notes* as these,
 wheresoever we find them in grave or
 slight Authours, are to my conceit ra-
 ther *Wishes* than *Precepts*; and in that
 quality I will passe them over. Yet I
 must withall say, that in the *seating* of
 our selves (which is a kind of *Marri-
 age* to a *Place*) *Builders* should be as
 circumspect as *Wooders*; lest when all is
 done, that *Doom* befall us, which our
 Master doth lay upon *Mitylene*: *A
 Town, in truth (saith he)
 finely built, but foolishly
 planted* And so much
 touching that which I
 termed the *Total Posi-
 tion*.
fare.

The

The next in Order is the placing of the *Parts*; About which (to leave as little as I may in my present labour, unto *Fancie*, which is wilde and irregular) I will propound a Rule of mine own Collection, upon which I fell in this manner. I had noted, that all *Art* was then in truest perfection, when it might be reduced to some naturall *Principle*. For what are the most judicious *Artisans* but the *Mimiques* of *Nature*? This led me to contemplate the Fabrick of our own Bodies, wherein the *High Architect* of the World had displayed such skill as did stupifie all humane reason. There I found the *Heart*, as the Fountain of Life, placed about the Middle, for the more equall communication of the vitall spirits. The *Eys* seated aloft, that they might describe the greater Circle within their view. The *Arms* projected on each side, for ease of reaching. Briefly (not to lose our selves in this speculation) it plainly appeareth, as a *Maxime* drawn from the Divine Light; That the *Place* of every part is to be determined by the *Use*.

So then from Naturall *Structure*, to proceed

proceed to Artificiall; and in the rudeſt things, to preſerve ſome *Image* of the excellenteſt. Let all the principall Chambers of *Delight*, All *Studies* and *Libraries*, be towards the *Eaſt* : For the Morning is a friend to the Muſes. All Offices that require heat, as *Kitchens*, *Stillatories*, *Stoves*, rooms for *Baking*, *Brewing*, *Washing*, or the like, would be *Meridionall*. All that need a cool and freſh temper, as *Cellars*, *Pantries*, *Butteries*, *Granaries*, to the *North*. To the ſame ſide likewiſe, all that are appointed for gentle Motion, as *Galleries*, eſpecially in warm Climes, or that otherwiſe require a ſteady and unvariable light, as *Pinacothecia* (ſaith *Vitruvius*) by which he intendeth, (if I may gueſſe at his Greek, as we muſt do often even at his Latine) certain *Repoſitories* for Works of Rarity in Picture or other Arts, by the Italians called *Studioli*; which at any other Quarter, where the courſe of the *Sun* doth diverſifie the *Shadows*, would loſe much of their grace. And by this Rule having always regard to the *Uſe*, any other Part may be fitly accommodated.

I must here not omit to note, that the Ancient *Grecians*, and the *Romans* by their example, in their Buildings abroad, where the *Seat* was free, did almost Religiously situate the *Front* of their Houses towards the South: perhaps that the Masters *Eye*, when he came home, might not be dazeled, or that being illustrated by the *Sun*, it might yeild the more gracefull *Aspect*; or some such reason. But from this the Modern *Italians* do vary; whereof I shall speak more in another place. Let thus much suffice at the present for the *Position* of the severall *Members*, wherein must be had, as our Authour doth often insinuate, and especially *lib 6. cap. 10.* a singular regard to the nature of the *Region*: Every Nation being tyed above all Rules whatsoever, to a discretion of providing against their own *Inconveniencies*: And therefore a good *Parlour* in *Egypt*, would perchance make a good *Cellar* in *England*.

There now followeth the second Branch of the generall *Section*. touching the *Work*,

In

In the *Work*, I will first consider the Principall parts, and afterwards the Accessory, or *Ornaments*; And in the Principall, first the Preparation of the *Materials*: and then the Disposition, which is the *Form*.

Now, concerning the *Material* Part; Although surely, it cannot disgrace an *Architect*, which doth so well become a *Philosopher*, to look into the Properties of *Stone* and *Wood*: as that Fir-trees, Cypresses, Cedars, and such other *Aereall* aspiring *Plants*, being by a kind of naturall rigour (which in a Man I would call pride) inflexible downwards, are thereby fittest for *Posts* or *Pillars*, or such upright use: that on the other side, Oak, and the like true hearty Timber, being strong in all Positions, may be better trusted in crosse and traverse Work; for *Summers*, or girding, and binding *Beams*, as they term them. And so likewise to observe of *Stone*, that some are better within, and other to bear *Weather*: Nay, to descend lower, even to examine *Sand*, and *Lyme*, and *Clay* (of all which things *Vitruvius* hath discoursed, without

out any daintiness, and the most of new Writers) I say, though the *Speculative* Part of such knowledge be *liberall* : yet to redeem this Profession, and my present pains from indignity ; I must here remember, That to choose and sort the *Materials* for every part of the *Fabrick*, is a Duty more proper to a second *Superintendent* over all the *Under-Artisans*, called (as I take it) by our Author, *Officinator*, *lib.6.cap.11.* and in that Place expressly distinguished from the *Architect*, whose glory doth more consist in the *Designement*, and *Idea* of the whole *Work* ; and his truest ambition should be to make the *Form*, which is the nobler Part (as it were) triumph over the *Matter* : whereof I cannot but mention by the way, a foreign Pattern ; namely, the Church of *Santa Giustina* in *Padua* : In truth, a sound piece of good Art, where the *Materials* being but ordinary stone, without any garnishment of Sculpture, do yet ravish the Beholder (and he knows not how) by a secret *Harmony* in the *Proportions*. And this indeed is that end, at which in some degree,
we

we should aim even in the privatest works : whereunto though I make haste , yet let me first collect a few of the least triviall Cautions belonging to the *Materiall Provision*.

Leon Batista Alberti is so curious, as to wish all the *Timber* cut out of the same *Forrest*, and all the *Stone* out of the same *Quarrie*.

Philibert de l'Orme the French Architect goes yet somewhat further, & would have the *Lynne* made of the very same *Stone*, which we intend to imploy in the *Work*; as belike imagining that they will sympathize and joyn the better by a kind of *Original* kindred. But such conceits as these seem somewhat too fine among this *Rubbage*, though I do not produce them in sport. For surely, the like agreements of Nature may have oftentimes a discreet application to Art. Always it must be confessed, that to make *Lynne* without any great choice , of refuse stuffe, as we commonly do, is an *English* error of no small moment in our Buildings. Whereas the *Italians* at this day,

day, and much more the *Ancients*, did burne their firmeſt *ſtone*, and even fragments of *Marble* where it was copious, which in time became almoſt *Marble* again, or at leaſt of indiffoluble durity, as appeareth in the ſtanding *Theaters*. I muſt here not omit, while I am ſpeaking of this part, a certain forme of *Brick* deſcribed by *Daniel Barbaro Patriarch of Aquileia*, in the largeſt Edition of his Commentary upon *Vitruvius*. The Figure triangular, every ſide a foot long, and ſome inch and a half thick, which he doth commend unto us for many good conditions: As that they are more commodious in the management, of leſſe expence, of fayrer ſhow, adding much beauty and ſtrength to the *Murall Angles*, where they fall gracefully into an indented *Werke*: ſo as I ſhould wonder that we have not taken them into uſe, being propounded by a man of good authority in this knowledge; but that all Nations do ſtart at *Novelties*, and are indeed married to their own *Moulds*. Into this place might aptly fall a doubt, which ſome have well moved; whether the ancient

cient *Italians* did burne their *Bricke* or no; which a passage or two in *Vitruvius* hath left ambiguous. Surely, where the *Naturall* heat is strong enough to supply the *Artificiall*, it were but a curious folly to multiply both *Labour* and *Expencc*. And it is besides very probable, that those *Materials* with a kindly and temperate heate would prove fairer, smoother, and lesse distorted, then with a violent: Only, they suffer two exceptions. First, that by such a gentle drying much time will be lost, which might otherwise be employed in compiling. Next, That they will want a certain sucking and soaking *Thirstinesse*, or a fiery appetite to drink in the *Lime*, which must knit the *rabrick*. But this question may be confined to the *South*, where there is more *Sunne* and patience. I will therefore not hinder my course, with this incident scruple, but close that part which I have now in hand, about the *Materials*, with a principall caution: That sufficient *Stuffe* and *Money* be ever ready before we beginne: For when we build now a piece, and then

then another by *fiss*, the *Worke* dries and sinkes unequally, whereby the *Walles* grow full of *Chinks* and *Crevices*; Therefore such pawlings are well reprov'd by *Palladio*, *lib.1.cap.1.* and by all other. And so having gleaned these few remembrances touching the preparation of the *Matter*, I may now proceed to the *Disposition* thereof, which must forme the *Worke*. In the *Forme*, as I did in the *Seat*, I will first consider the generall *Figuration*, and then the severall *Members*.

Figures are either *simple* or *Mixed*. The simple be either *Circular* or *Angular*. And of *Circular*, either *Complete*, or *Deficient*, as *Ovals*; with which kindes I will be contented, though the *Distribution* might be more curious.

Now the exact *Circle* is in truth a *Figure*, which for our purpose hath many fit and eminent properties; as fitnessse for *Commodity* and *Receipt*, being the most capable; fitnessse for *strength* and *duration*, being the most united in his parts; fitnessse for *beauty* and *delight*, as imitating the celestiall

tiall Orbes, and the universall *Forme*. And it seemes, besides, to have the approbation of *Nature*, when she worketh by *Instinct*, which is her secret Schoole: For birds do build their nests *Spherically*: But notwithstanding these Attributes, it is in truth a very unprofitable Figure in private *Fabricks*, as being of all other the most chargeable, and much roome lost in the bending of the *Walles*, when it comes to be divided: besides an ill distribution of light, except from the *Center* of the *Roofe*. So as anciently it was not usuall, save in their *Temples* and *Amphi-Theaters*, which needed no *Compartitions*. The *Ovals* and other imperfect circular *Formes*, have the same exceptions, and lesse benefit of capacity: So as there remains to be considered in this generall survey of *Figures*, the *Angular*, and the *Mixed* of both. Touching the *Angular*, it may perchance sound somewhat strangely, but it is a true observation, that this *Art* doth neither love many *Angles*, nor few. For first, the *Triangle*, which hath the fewest sides and corners, is of
all

all other the most condemned, as being indeed both incapable and infirme (whereof the reason shall be afterwards rendred) and likewise unresolvable into any other regular *Forme* then it self in the inward *Partitions*.

As for Figures of five, six, seven; or more *Angles*: They are surely fitter for *Militar Architecture* (where the Bulworks may be layed out at the *Corners*, and the sides serve for *Curtaines*) then for civill use; though I am not ignorant of that famous Piece at *Capra-rola*, belonging to the house of *Fárnese*, cast by *Baroccio* into the forme of a *Pentagone*, with a *Circle* inscribed, where the *Architect* did ingeniously wrestle with divers inconveniences in disposing of the *Lights* and in saving the vacuities. But as designs of such nature do more ayme at Rarity, then Commodity; so, for my part, I had rather admire them, then commend them.

These things considered, we are both by the Precepts and by the Practice of the best Builders, to resolve upon *Rectangular Squares*, as a mean between

tween too few, and too many Angles; and through the equall inclination of the sides (which make the right Angle) stronger then the *Rhombe*, or *Loſenge*, or any other irregular *Square*. But whether the exact *Quadrat*, or the long *Square* be the better, I finde not well determined, though in mine own conceit, I muſt preferre the latter; provided that the *Length* do not exceed the *Latitude* above one third part, which would diminifh the beauty of the *Aſpect*, as ſhall appear when I come to ſpeak of *Symmetry* and *Proportion*

Of mixed Figures, partly *Circular*, and partly *Angular*, I ſhall need to ſay nothing; becauſe having handled the ſimple already, the mixed, according to their compoſition, do participate of the ſame reſpects. Only againſt theſe, there is a proper *Objection*, that they offend *Uniformity*: Whereof I am therefore opportunely induced to ſay ſomewhat, as farre as ſhall concerne the outward *Aſpect*, which is now in Diſcourſe.

In *Architecture*, there may ſeem to be

two opposite affectations, *Uniformity* and *Variety*, which yet will very well suffer a good reconciliation, as we may see in the great Pattern of *Nature*, to which I must often resort: For surely, there can be no *Structure* more uniform than our *Bodies* in the whole *Figuration*: Each side agreeing with the other, both in the number, in the quality, and in the measure of the Parts: And yet some are round, as the *Armes*; some flat, as the *Hands*; some prominent, and some more retired: So as upon the matter, we see that *Diversity* doth not destroy *Uniformity*, and that the Limbs of a noble *Fabrick*, may be correspondent enough, though they be various; Provided always, that we do not run into certain extravagant Inventions, whereof I shall speak more largely when I come to the parting and casting of the whole *Work*. We ought likewise to avoid Enormous heights of six or seven *Stories*, as well as irregular *Forms*; and the contrary fault of low-distended *Fronts*, is as unseemly: Or again, when the *Face* of the Building is narrow,

row, and the *Flank* deep : To all which extreams some particular Nations or Towns are subject, whose Names may be civilly spared : And so much for the generall *Figuration*, or *Aspect* of the *Work*.

Now concerning the Parts in Severalty. All the Parts of every *Fabrick* may be comprised under five Heads, which Division I receive from *Batista Alberti*, to do him right. And they be these.

The *Foundation*.

The *Walls*.

The *Appertions* or *Overtures*.

The *Compartition*.

And the *Cover*.

About all which I purpose to gather the principall Cautions, and as I passe along, I will touch also the naturall Reasons of *Art*, that my Discourse may be the lesse *Mechanicall*.

First then concernig the *Foundation*, which requireth the exactest care ; For if that happen to dance, it will marre all the mirth in the House : Therefore that we may found our Habitation firmly, we must first examine the *Bed*

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of

of *Earth* (as I may term it,) upon which we will Build; & then the underfillings, or *Substruction*, as the Ancients did call it: For the former, we have a generall Precept in *Vitruvius* twice precisely repeated by him, as a Point indeed of main consequence; first, *l. 1. c. 5.* And again more fitly, *l. 3. c. 3.* in these words, as *Philander* doth well correct the vulgar Copies: *Substructionis Foundationes fodiantur* (saith he) *si queant inveniri ad solidum, & in solido.* By which words I conceive him to commend unto us, not only a diligent, but even a jealous examination what the *Soil* will bear: advising us, not to rest upon any appearing *Solidity*, unless the whole *Mould* through which we cut, have likewise been *solid*; But how deep we should go in this search, he hath no where to my remembrance determined, as perhaps depending more upon *Discretion*, then *Regularity*, according to the weight of the *Work*; yet *Andrea Palladio* hath fairly adventured to reduce it into Rule: Allowing for that *Cavazione* (as he calleth it) a sixth part of the height of the whole *Fabrick*, unless
the

the Cellars be under ground, *under-dig-*
in which case he would have *ing, or Hol-*
us (as it should seem) to *lowing of*
found somewhat lower. *the Earth.*

Some *Italians* do prescribe, that when they have chosen the *Floor*, or Plot, and laid out the Limits of the *Work*, we should first of all Digge *Wels* and *Cisterns*, and other Under-conducts and Conveyances, for the *Swillage* of the House, whence may arise a double benefit: for both the nature of the *Mould* or *Soil*, would thereby be safely searched, and moreover those open vents will serve to discharge such *Vapours*, as having otherwise no issue, might peradventure shake the Building. This is enough for the naturall Grounding; which though it be not a Part of the solid *Fabrick*, yet here was the fittest place to handle it.

There followeth the *Substruction*, or Ground-work of the whole *Edifice*, which must sustain the *Walls*; and this is a kind of *Artificiall* Foundation, as the other was *Natural*. About which these are the chiefe Remembrances: First, that the bottom be precisely le-

vell,

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vell, where the *Italians* therefore commonly lay a platform of good Board ; Then that the lowest *Ledge* or *Row* be meerly of *Stone*, and the broader the better, closely laid without *Mortar*, which is a generall Caution for all parts in Building, that are contiguous to *Board* or *Timber*, because *Lime* and *Wood* are infociable; and if any where unfit Confiners, then most especially in the *Foundation*. Thirdly, That the bredth of the *Substruction* be at least double to the *insistent Wall*, and more or lesse, as the weight of the *Fabrick* shall require ; for as I must again repeat, *Discretion* may be freer then *Art*. Lastly, I find in some a curious precept, that the *Materials* below, be laid as they grew in the *Quarry*, supposing them belike to have most strength in their *Natural* and *Habitual* Posture. For as *Philippe de l'Orme* observeth, the breaking or yeilding of a stone in this part, but the bredth of the back of a knife, will make a *Cleft* of more then half a foot in the *Fabrick* aloft: So important are *fundamental Errors*. Among which notes I have said nothing of
Palli-

Pallification, or *Pyling* of the *Ground-plot*, commanded by *Vitruvius*, when we build upon a moist or marshy *Soil*, because that were an errour in the first choyce. And therefore all *Seats* that must use such provision below (as *Venice* for an eminent example) would perhaps upon good enquiry, be found to have been at first chosen by the Counsell of *Necessity*.

Now the *Foundation* being searched, and the *Substruction* laid, we must next speak of the *Wals*.

Wals are either entire and continuall, or intermitted; and the *Intermissions* be either *Pillars* or *Pylasters*; for here I had rather handle them, then, as some others do, among *Ornaments*.

The entire *Muring* is by Writers diversly distinguished: By some, according to the quality of the *Materials*, as either *Stone* or *Brick*, &c. Where, by the way, let me note, that to build *Wals* and greater Works of *Flint*, whereof we want not example in our *Island*, and particularly in the *Province* of *Kent*, was (as I conceive) meerly unknown to the *Ancients*, who observing in that *Mat-*

riall, a kind of *Metallick* Nature, or at least a *Fusibility*, seem to have resolved it into nobler use; an Art now utterly lost, or perchance kept up by a few *Chymicks*. Some again do not so much consider the quality, as the *Position* of the said *Materials*: As when Brick or squared Stones are laid in their lengths with sides and heads together, or their Points conjoynd like a *Network* (for so *Vitruvius* doth call it *reticulatum opus*) of familiar use (as it should seem) in his Age, though afterwards grown out of request, even perhaps for that subtile speculation which he himself toucheth; because so laid, they are more apt in swagging down, to pierce with their points, then in the jacent Posture; and so to crevice the *Wall*: But to leave such cares to the meaner Artificers, the more essentiall are these.

That the *Walls* be most exactly perpendicular to the *Ground-Work*, for the right *Angle* (thereon depending) is the true cause of all *Stability*, both in Artificiall and Naturall Positions: A man likewise standing firmest,

meest, when he stands uprightest. That the massiest and heaviest *Materials* be the lowest, as fitter to bear, then to be born. That the *Work*, as it riseth, diminish in *thicknesse* proportionally, for ease both of weight, and of expence. That certain *Courses* or *Ledges* of more strength then the rest, be interlayed like *Bones*, to sustain the *Fabrick* from totall ruine, if the under parts should decay. Lastly, that the *Angles* be firmly bound, which are the *Nerves* of the whole *Edifice*, and therefore are commonly fortified by the *Italians*, even in their Brick buildings, on each side of the corners, with well squared Stone, yeilding both strength and grace. And so much touching the entire or solid *Wall*.

The Intermissions (as hath been said) are either by *Pillars*, or *Pyliasters*.

Pillars, which we may likewise call *Columnes* (for the word among Artificers is almost naturalized) I could distinguish into *Simple* and *Compounded*. But (to tread the beaten and plainest way) there are five *Orders* of *Pillars*, according to their dignity and perfection, thus marshalled.

The *Tuscan*.

The *Dorique*.

The *Ionique*.

The *Corinthian*.

And the *Compound Order*, or as some call it, the *Roman*; others more generally the *Italian*.

In which five *Orders*; I will first consider their *Communities*, and then their *Proprieties*.

Their *Communities* (as far as I observe) are Principally three. First, they are all *Round*; for though some conceive *Columna Atticarges*, mentioned by *Vitruvius*, lib. 3. cap. 3. to have been a squared Pillar, yet we must pass it over as irregular, never received among these *Orders*, no more then certain other licentious inventions, of *Wreathed*, and *Vined*, and *Figured Columnes*, which our Author himself condemneth, being in his whole Book a professed enemy to *Fancies*..

Secondly, they are all *Diminished* or *Contracted* insensibly, more or lesse, according to the proportion of their heights, from one third part of the whole *Shaft* upwards, which *Philander*
doth.

doth prescribe by his own precise measuring of the Ancient remainders, as the most gracefull *Diminution*. And here I must take leave to blame a practice grown (I know not how) in certain places too familiar, of making *Pillars* swell in the middle, as if they were sick of some *Tympany*, or *Drop-sie*, without any Authentique Pattern or Rule, to my knowledge, and unseemely to the very judgment of sight. True it is, that in *Vitruvius*, lib. 3. cap. 2. we finde these words, *De adjettione, quæ adjicitur in mediis Columnis, quæ apud Grecos Ἐνλααίς appellatur, in extremo libro erit formatio ejus*; which passage, seemeth to have given some countenance to this error. But of the promise there made, as of diverse other elsewhere, our Master hath fayled us, either by slip of memory, or injury of time, and so we are left in the dark. Alwayes sure I am, that besides the authority of example which it wanteth, It is likewise contrary to the Originall and Naturall *Type*, in *Trees*, which at first was imitated in *Pillars*, as *Vitruvius* himself observeth, lib. 5. cap. 1. For
who

who ever saw any *Cypress*, or *Pine* (which are there alledged) small below and above, and tumerous in the middle; unless it were some diseased Plant, as Nature (though otherwise the comliest *Mistresse*) hath now and then her deformities and *Irregularities*?

Thirdly, they have all their *Under-settings*, or *Pedistals*, in height a third part of the whole *Column*, comprehending the *Base* and *Capitall*; and their upper Adjuncts, as *Architrave*, *Frize*, and *Cornice*, a fourth part of the said Pillar; which rule, of singular use and facility, I find settled by *Jacobo Baroccio*; and hold him a more credible Author, as a man that most intended this piece, then any that vary from him in those *Dimentions*.

These are their most considerable *Communities* and agreements.

Their *Proprieties* or *Distinctions* will best appeare by some reasonable description of them all, together with their *Architraves*, *Frizes*, and *Cornices*, as they are usually handled.

First therefore, the *Tuscan* is a plain, massie, rurall Pillar, resembling some
sturdy

sturdy well-limb'd Labourer, homely clad, in which kinde of comparisons *Vitruvius* himself seemeth to take pleasure, *lib. 4. cap. 1* The length thereof shall be six *Diameters*, of the grossest of the Pillar below. Of all proportions, in truth, the most naturall; For our Author tells us, *lib. 3. cap. 1.* that the foote of a man is the sixth part of his body in ordinary measure, and *Man* himself according to the saying of *Protagoras* (which *Aristotle* doth somewhere vouchsafe to celebrate) is τὸ πρὸς ἀπάντων γενμάτων μέτρον, as it were, the *Prototype* of all exact *Symmetrie*, which we have had other occasions to touch before: This *Column* I have by good warrant called *Rurall*, *Vitru. cap. 2. lib. 3.* And therefore we need not consider his rank among the rest. The distance or *Intercolumniation* (which word Artificers do usually borrow) may be neer four of his own *Diameters*, because the *Materials* commonly layd over this Pillar, were rather of wood then stone, through the lightness whereof the *Architrave* could not suffer, though thinly supported, nor the

the *Columnne* it self being so substanti-
all. The *Contraction* aloft shall be
(according to the most received pra-
ctice) one fourth part of his thickness
below. To conclude, (for I intend on-
ly as much as shall serve for a due Di-
stinguishment, and not to delineate
every petty member) the *Tuscan* is of
all the rudest Pillar, and his Principall
Character *Simplicity*,

The *Dorique Order* is the gravest
that hath been received into civill
use, preserving, in comparison of those
that follow, a more *Masculine Aspect*,
and little trimmer then the *Tuscan* that
went before, save a sober garnishment
now and then of *Lions heads* in the
Cornice, and of *Triglyphs* and *Metopes*
alwayes in the *Frize*. Sometimes like-
wise, but rarely, channeled, and a little
slight Sculpture about the *Hypotrache-
lion* or *Necke*, under the *Capitall*. The
length, seven *Diameters*. His rank or
degree, is the lowest by all *Congruity*,
as being more massie then the other
three, and consequently abler to sup-
port. The *Intercolumniation*, thrice as
much as his thickness below. The
Contra-

Contraction aloft, one fift of the same measure. To discern him, will be a peice rather of good *Heraldry*, then of *Architecture*: For he is best known by his place when he is in company, and by the peculiar ornament of his *Frize* (before mentioned) when he is alone.

The *Ionique Order* doth represent a kinde of Feminine slenderness, yet saith *Vitruvius*, not like a light Housewife, but in a decent dressing, hath much of the *Matrone*. The length eight *Diameters*. In degree as in substantialnesse, next above the *Dorique*, sustayning the third, and adorning the second Story. The *Intercolumniation* two of his own *Diameters*. The *Contraction* one sixt part. Best known by his trimmings, for the body of this *Columnne* is perpetually channeled, like a thick pleighted Gown. The *Capitall* dressed on each side, not much unlike womens Wires, in a spirall wreathing, which they call the *Ionian Voluta*. The *Cornice* indented. The *Frize* swelling like a pillow; And therefore by *Vitruvius*, not unelegantly termed *Pulvinata*. These are his best Characters.

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The *Corinthian*, is a *Columnne* laciviously decked like a Curtezan, and therein much participating (as all Inventions do) of the place where they were first born: *Corinth* having been without controversie one of the wantonest Townes in the world. This *Order* is of nine *Diameters*. His degree, one Stage above the *Ionique*, and alwaies the highest of the simple *Orders*. The *Intercolumniation* two of his *Diameters*, and a fourth part more, which is of all other the comliest distance. The *Contraction* one seventh Part. In the

Our artizans call them
Teeth and
Carionzes.

Cornice both *Dentelli* and *Modiglioni*. The *Frize*, adorned with all kinds of *Figures* and various *Compartments* at Pleasure. The *Capitals*, cut into the beautifullest lease that Nature doth yeeld; which surely, next the *Aconitum Pardalianches* (rejected perchance as an ominous Plant) is the *Acanthus*, or *Brancha Ursina*; though *Vitruvius* do impute the choice thereof unto Chance, and we must be contented to beleieve him: In short, As *Plainness* did Characterize the *Tuscan*, so must Delicacy

cacy and *Variety* the *Corinthian* Pillar ; besides the height of his Rank.

The last is the *Compunded Order* : His *name* being a brieft of his Nature. For this Pillar is nothing in effect, but a *Medlie*, or an *Amasse* of all the precedent *Ornaments*, making a new kinde, by stealth ; and though the most richly tricked, yet the poorest in this, that he is a borrower of all his Beauty. His length, (that he may have somewhat of his own) shall be of ten *Diameters*. His degree should, no doubt, be the highest by reasons before yeelded. But few *Palaces*, Ancient or Moderne, exceed the third of the *Civill Orders*. The *Intercolumniation* but a *Diameter* and an half, or alwayes somewhat less then two. The *Contraction* of this Pillar must be one eighth Part less above then below. To know him will be easie by the very mixture of his *Ornaments*, and *Clothing*.

And so much touching the five *Orders* of *Columnes*, which I will conclude with two or three not impertinent *Cautions* :

First, that where more of these *Orders*

ders then one, shall be set in severall *Stories* or *Contignations*, there must be an exquisite care to place the *Columnes* precisely, one over another, that so the *solid* may answer to the *solid*, and the *vacuities* to the *vacuities*, as well for *Beauty*, as strength of the *Fabrick*: And by this Caution the Consequence is plain, that when we speak of the *Intercolumniation* or *Distance* which is due to each *Order*, we mean in a *Doricque*, *Ionicall*, *Corinthian* *Porch*, or *Cloister*, or the like of one *Contignation*, and not in *Storied* Buildings.

Secondly, Let the *Columnes* above be a fourth part lesse then those below, saith *Vitruvius*, *lib. 5. cap. 1.* A strange Precept in my opinion; and so strange, that peradventure it were more suitable, even to his own Principles, to make them rather a fourth Part greater. For *lib. 3. cap. 2.* where our Master handleth the *Contractions* of Pillars, we have an *Optique* Rule, that the higher they are, the lesse should be always their diminution aloft, because the *Eye* it selfe doth naturally contract all *Objects* more or lesse, according to
the

the *Distance*; which Consideration may, at first sight, seem to have been forgotten in the Caution we have now given; but *Vitruvius* (the best Interpreter of himselfe) hath in the same place of his fift Book well acquitted his Memory by these words: *Columnae superiores quarta parte minores, quam inferiores, sunt constituenda; propterea quod, operi ferendo, quae sunt inferiora, firmitiora esse debent*; preferring like a wise Mechanick, the naturall Reason before the *Mathematical*, and sensible conceits before abstracted. And yet *lib. 4. cap. 4.* he seemeth again to affect *Subtilty*, allowing Pillars the more they are channeled, to be the more slender; because while our *Eye* (saith he) doth as it were distinctly measure the eminent and the hollowed Parts, the Totall Object appeareth the bigger, and so as much as those excavations do subtract, is supplied by a *Fallacy* of the *Sight*: But here me thinks, our Master should likewise have rather considered the naturall Inconvenience; for though Pillars by channeling, be seemingly ingrossed to our Sight, yet they

they are truly weakened in themselves; and therefore ought perchance in sound reason not to be the more slender, but the more corpulent, unlessse apparances preponder truths, but *Contra Magistrum non est disputandum.*

A third Caution shall be, that all the projected or jutting Parts (as they are termed) be very moderate, especially, the *Cornices* of the lower Orders; for whilest some think to give them a beautifull and royall Aspect by their largenesse, they somtimes hinder both the Light within, (whereof I shall speak more in due place) and likewise detract much from the view of the *Front* without, as well appeareth in one of the principall Fabricks at *Venice*, namely, the Palace of the Duke *Grimani* on the *Canal Grande*, which by this magnificent errour, is somewhat disgraced: I need now say no more concerning *Columnes* & their *Adjuncts*, about which Architects make such a noyse in their Books, as if the very terms of *Architraves*, and *Frizes*, and *Cornices*, and the like, were enough to graduate a Master of this
Art;

Art: yet let me before I passe to other matter, prevent a familiar Objection; It will perchance be said, that all this Doctrine touching the five *Orders*, were fitter for the *Quarries* of *Asia*, which yeilded 127. *Columnes* of 60. Foot high to the *Ephesian Temple*; or for *Numidia*, where *Marbles* abound; then for the *Spirits* of *England*, who must be contented with more ignoble *Materials*: To which I answer, That this need not discourage us: For I have often at *Venice* viewed with much pleasure, an *Atrium Græcum* (we may translate it an *Anti-porch*, after the Greek manner) raised by *Andrea Palladio*, upon eight *Columnes* of the compounded *Order*; The *Bases* of Stone, without *Pedistals*; The *Shafts* or *Bodies* of meer Brick, three foot and an halfe thick in the *Diameter* below, and consequently thirty five foot high, as himself hath described them in his second Book; Then which, mine Eye hath never yet beheld any *Columnes* more stately of Stone or Marble; For the Bricks having first been formed in a *circular Mould*, and then cut before
their

their burning into four Quarters or more, the sides afterwards joyne so closely, and the points concenter so exactly, that the *Pillars* appear one entire *Peece*; which short description I could not omit, that thereby may appear, how in truth we want rather *Art* then *Stuffe*, to satisfie our greatest *Fancies*.

After *Pillars*, the next in my distribution are *Pylasters*, mentioned by *Vitruvius*, *lib.5.cap.1.* and scant any where else under the name of *Parastates*, as *Philander* conceiveth, which *Grammatical Point* (though perchance not very clear) I am contented to examine no further. Always, what we mean by the thing it selfe is plain enough in our own vulgar; Touching which, I will brietly collect the most considerable Notes.

Pylasters must not be too tall and slender, lest they resemble *Pillars*, not too *Dwarfish* and grosse, lest they imitate the *Piles* or *Peers* of Bridges; Smoothnesse doth not so naturally become them, as a Rustick *Superficies*; for they aim more at *State & Strength*;
then

then *Elegancie*. In private Buildings they ought not to be narrower then one Third, nor broader then two parts of the whole Vacuity between *Pylaster* and *Pylaster*; but to those that stand at the Corners, may be allowed a little more Latitude by discretion, for strength of the *Angles*: In *Theaters* and *Amphi-theaters* and such weighty Works, *Palladio* observeth them, to have been as broad as the half, and now and then as the whole Vacuity. He noteth likewise (and others consent with him) that their true *Proportion* should be an exact *Square*; But for lessening of expence, and enlarging of room, they are commonly narrower in *Flank*, then in *Front*; Their principall *Grace* doth consist in halfe or whole *Pillars* applied unto them; in which case it is well noted by Authours, that the *Columnes* may be allowed somewhat above their ordinary length, because they lean unto so good *Supporters*. And thus much shall suffice touching *Pylasters*, which is a cheap, and a strong, and a noble kind of *Structure*.

¶ Now

Now because they are oftner, both for Beauty and Majesty, found *arched*, then otherwise; I am here orderly led to speak of *Arches*, and under the same head of *Vaults*: for an *Arch* is nothing indeed but a contracted *Vault*, and a *Vault* is but a dilated *Arch*: Therefore to handle this Piece both compendiously, and fundamentally, I will resolve the whole businesse into a few *Theorems*.

Theorem 1.

All solid *Materials* free from impediment, do descend *perpendicularly* downwards, because *Ponderosity* is a naturall inclination to the Center of the World, and *Nature* performeth her Motions by the shortest lines.

Theorem 2.

Bricks moulded in their ordinary *Rectangular* forme, if they shall be laid one by another in a levell row, between any Supporters sustaining the two ends, then all the pieces between
will

will necessarily sink even by their own natural *Gravity*; and much more, if they suffer any depression by other weight above them, because their sides being *parallell*, they have room to descend *perpendicularly*, without impeachment, according to the former *Theorem*; Therefore to make them stand, we must either change their *Posture*, or their *Figure*, or both.

Theorem 3

If Bricks moulded, or Stones squared *Cuneatim* (that is, *Wedge-wise*, broader above then below) shall be laid in a *Row-levell*, with their ends supported, as in the precedent *Theorem*, pointing all to one *Center*; then none of the pieces between can sink till the *Supporters* give way, because they want room in that *Figuration*, to descend *perpendicularly*. But this is yet a weak piece of *Structure*, because the *Supporters* are subject to much impulsion, especially if the line be long; for which reason this *Form* is seldom used, but over *Windows*, or narrow *Doors*.

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Therefore to fortifie the *Work* as in this third *Theoreme*, we have supposed the *Figure* of all the *Materials* different from those in the second : So likewise we must now change the *Posture*, as will appear in the *Theoreme* following.

Theoreme 4.

If the *Materials* figured as before *Wedge-wise*, shall not be disposed levelly, but in form of some *Arch*, or portion of a Circle, pointing all to the same Center, In this case neither the pieces of the said *Arch* can sink downwards, through want of room to descend *By the first* perpendicularly ; Nor the *Theor.* *Supporters* or *Butments* (as they are termed) of the said *Arch* can suffer so much violence, as in the precedent flat *Posture* ; for the roundness will always make the incumbent weight rather to rest upon the *Supporters*, then to shove them ; whence may be drawn an evident Corolary : that the safest of all *Arches* is the *Semi-circuler*, and of all *Vaults* the *Hemisphere*, though not absolutely exempted from some natural

rall weaknesse, * as *Barnardino Baldi* Abbot of *Guaftalla*, in his Commentary upon *Aristotles Mechanicks*, doth ver-
 ry well prove : where let me note by the way, that when any thing is *Mathematically* demonstrated weak, it is much more *Mechanically* weak : Errours ever occurring more easily in the management of *Grosse Materials* then *Lineall* *Designes*.

Which is the sole Prerogative of perpendicular Lines, and right Angles.

Theoreme 5.

As *Semicircular Arches*, or *Hemifhericall Vaults*, being raised upon the totall *Diameter*, be of all other the roundest, and consequently the secur-
 rest, by the precedent *Theoreme* : So those are the gracefullest, which keeping precisely the same height, shall yet be distended one fourteenth part longer then the said entire *Diameter* ; which addition of distent will confer much to their *Beauty*, and detract but little from their *Strength*.

This Observation I find in *Leon-Barista Alberti* ; But the practice how to preserve the same height, and yet

distend the Arms or Ends of the Arch, is in *Albert Durers Geometry*, who taught the *Italians* many an excellent *Line*, of great use in this *Art*.

Upon these five *Theoremes*, all the skill of *Arching* and *Vaulting* is grounded : As for those *Arches*, which our Artizans call of the third and fourth point; And the *Tuscan* Writers *di terzo*, and *di quarto acuto*, because they alwayes concur in an acute Angle, and do spring from division of the *Diameter* into three, four, or more parts at pleasure ; I say, such as these, both for the naturall imbecility of the sharp Angle it selfe, and likewise for their very *Uncomelinesse*, ought to be exiled from judicious eyes, and left to their first Inventors, the *Gothes* or *Lumbards*, amongst other *Reliques* of that barbarous Age.

Thus of my first *Partition* of the parts of every *Fabrick*, into five Heads, having gone through the two former, & been incidently carried into this last Doctrin touching *Arches* and *Vaults*. The next now in order are the *Apertions*; under which term I
do

do comprehend *Doors*, *Windowes*, *Stair-cases*, *Chymnies*, or other *Conducts*: In short, all *In-lets*, or *Out-lets*; To which belong two generall Cautions.

First, That they be as few in number, and as moderate in Dimension, as may possibly consist with other due respects: for in a word, all *Openings* are *Weaknings*.

Secondly, That they do not approach too near the *Angles* of the *Wals*; for it were indeed a most essentiall *Solecisme* to weaken that part which must strengthen all the rest: A precept well recorded, but ill practised by the *Italians* themselves, particularly at *Venice*, where I have observed divers *Pergoli*, or *Meniana* (as *Vitruvius* seemeth to call them, which are certain ballised out-standings to satisfie curiosity of sight) very dangerously set forth, upon the very point it self of the *Murall Angle*.

Now, Albeit I make haste to the casting and comparting of the whole *Work*, (being indeed the very Definitive Sum of this Art, to distribute

usefully and gracefully a well chosen Plot) yet I will first under their severall Heads, collect briefly some of the choyest notes belonging to these particular *Overtures*.

Of *Doors* and *Windows*.

THese *In-lets* of *Men* and of *Light*, I couple together, because I find their Dimensions brought under one Rule by *Leon Alberti* (a learned Searcher) who from the School of *Pythagoras* (where it was a fundamentall *Maxime*, that the *Images* of all things are latent in *Numbers*) doth determine the comeliest Proportion between bredths and heights; Reducing *Symmetrie* to *Symphonie*, and the *harmony* of *Sound*, to a kinde of *harmony* in *Sight*, after this manner: The two principal Consonances, that most ravish the Ear, are by consent of all Nature, the *fift*, and the *Octave*; whereof the first riseth radically from the proportion between *two* and *three*; The other from the double *Intervall*, between *One* and *Two*, or between *Two* and

and *Four*, &c. Now if we shall transport these proportions from Audible to Visible *Objects*; and apply them as they shall fall fittest (the nature of the Place considered) namely, in some *Windows* and *Doors*, the *Symmetrie* of *Two* to *Three* in their Breadth and Length; In others, the double as aforesaid; There will indubitably result from either a gracefull and *harmonious* contentment to the Eye: Which speculation, though it may appear unto vulgar *Artizans*, perhaps too subtil, and too sublime, yet we must remember, that *Vitruvius* himself doth determine many things in his profession by *Musical* Grounds, and much commendeth in an *Architect*, a *Philosophical* Spirit; that is, he would have him (as I conceive it) to be no superficial, and floating *Artificer*; but a *Diver* into *Casfes*, & into the *Mysteries* of *Proportion*. Of the *Ornaments* belonging both to *Doors* and *Windows*, I shall speak in other place; But let me here adde one Observation; That our *Master* (as appeareth by divers passages, and particularly *lib. 6. cap. 9.*) seems to have

been an extream Lover of *Luminous Roomes* ; And indeed, I must confesse, that a Frank Light can mis-become no *Ædifice* whatsoever, *Temples* only excepted ; which were anciently dark, as they are likewise at this day in some Proportion. *Devotion more requiring collected then diffused Spirits.*

Lumen est diffusivum sui & alieni. Yet on the other side, we must take heed to make a House (though but for civill use)

all *Eys*, like *Argus* ; which in *Northern Climes* would be too cold, In *Southern* too hot : And therefore the matter indeed importeth more then a merry comparison. Besides, There is no part of *Structure* either more expenceful then *Windows*, or more ruinous ; not only for that vulgar reason, as being exposed to all violence of weather ; but because consisting of so different and unfociable pieces, as *Wood*, *Iron*, *Lead*, and *Glasse*, and those small and weak, they are easily shaken ; I must likewise remember one thing, (though it be but a *Grammatical Note*) touching *Doors*. Some were *Fores* and some were *Valve*. Those (as the very word may seem to import) did open

out-

outwards, These *inwards*, and were commonly of two *Leaves* or *Panes*, (as we call them) thereby requiring indeed a lesser *Circuit* in their *unfoldings*; And therefore much in use among *Italians* at this day; But I must charge them with an Imperfection, for though they let in as well as the former, yet they keep out worse..

Of Stair-cases.

TO make a Compleat *Stair-case*, is a curious piece of *Architecture*: The vulgar Cautions are these.

That it have a very liberall *Light* against all Casualty of *Slips*, and *Falls*,.

That the space above the Head, be large and airy, which the *Italians* use to call *Un bel-sfogolo*, as it were good *Ventilation*, because a man doth spend much breath in mounting.

That the *Half-paces* be well distributed at competent distances, for reposing on the way.

That to avoid *Encounters*, and besides

sides to gratifie the beholder, the whole *Staire-case* have no niggard *Latitude*, that is, for the principall *Ascent*, at least ten foot in *Royall Buildings*.

That the breadth of every single *Step* or *Staire* be never less then one foot, nor more then eighteen inches.

That they exceed by no means half a foot in their height or thickness, for our *Legges* do labour more in *Elevation*, then in *Distention* : These I say are familiar remembrances, to which let me add,

That the steps be layd where they joyn *Con un tantino di scarpa* ; we may translate it somewhat *sloaping*, that so the foot may in a sort both ascend and descend together, which though observed by few, is a secret and delicate deception of the pains in mounting.

Lastly, to reduce this doctrine to some *Naturall*, or at least *Mathematicall* ground, (our *Master*, as we see, *lib. 9 cap. 2.*) borroweth those proportions that make the sides of a *Rectangular Triangle*, which the Ancient Schoole did expresse in lowest termes, by the numbers of 3. 4. and, 5. That is, *Three*
for

for the *Perpendicular*, from the *Staire-head* to the ground ; *Foure* for the *Ground-line* it self, or *Recession* from the wall ; And *Five* for the whole *Inclination* or *Hoapeness* in the ascent ; which proportion, saith he, will make *Temperatas graduum librationes*. Hitherto of *Staire-cases* which are direct : There are likewise *Spirall*, or *Cockle staires*, either *Circular*, or *Ovall*, and sometimes running about a *Pillar*. Sometimes vacant, wherein *Palladio*, (A man in this point of singular felicity) was wont to divide the *Diameter* of the first sort into three parts, yeelding one to the *Pillar*, and two to the *Steps* ; Of the second into four, whereof he gave two to the *Staires*, and two to the *Vacuity*, which had all their light from above. And this in exact *Ovals* is a Master-piece.

O F C H I M N I E S.

IN the present business, *Italians* (who make very frugall fires, are perchance not the best Counsellors.) Therefore from them we may better learn, both
how

how to raise faire *Mantels* within the roomes, and how to disguise gracefully the shafts of Chimnies abroad (as they use) in sundry formes, (which I shall handle in the later part of my Labour) and the rest I will extract from *Philippe de l'Orme*; in this part of his *Work* more diligent, then in any other; or, to do him right, then any man else.

First, he observeth very soberly, that who in the disposition of any Building will consider the nature of the *Region*, and the *Winds* that ordinarily blow from this, or that *Quarter*; might so cast the roomes which shall most need fire, that he should little feare the incommody of *Smoke*: and therefore he thinkes that inconvenience, for the most part, to proceede from some inconsiderate beginning. Or if the errour lay not in the *Disposition*, but in the *Structure* it self; then he makes a *Logicall* enquiry, That either the *Winde* is too much let in above, at the mouth of the *Shaft*, or the *Smoke* stifled below: If none of these, Then there is a repulsion of the *Fume*, by
some

some higher *Hill* or *Fabrick*, that shall overtop the Chimney, and worke the former effect : If likewise not this, Then he concludes, that the Roome which is infested, must be necessarily both little and close, so as the smoke cannot issue by a naturall *Principle*, wanting a succession and supply of new *Ayre*,

Now, In these cases he suggesteth divers Artificiall remedies, of which I will allow one a little *Description*, because it favoureth of *Philosophie*, and was touched by *Vitruvius* himself, *lib. 1. cap. 6.* but by this man ingeniously applied to the present use. He will have us provide two hollow *brass Balls* of reasonable capacitie, with little holes open in both, for reception of Water, when the Air shall be first sucked out ; One of these we must place with the hole upwards, upon an iron Wire, that shall traverse the *Chimney*, a little above the *Mantell*, at the ordinary height of the sharpest heate or flames, whercof the water within being rarified, and by rarifaction resolved into *Winde*, will break out, and so force up the smoke.

smoke, which otherwise might linger
 in the *Tunnell*, by the way, and of-
 tentimes revert ; With the other. (saith
 he) we may supply the place of the for-
 mer, when it is exhausted ; or for a
 need blow the *Fire* in the mean while .
 Which Invention I have interposed for
 some little intertainment of the Reader ;
 I will conclude with a note from *Pal-
 ladio*, who observeth that the *Ancients*
 did warm their Roomes with certain
 secret *Pipes* that came through the
 Walles, transporting heate (as I con-
 ceive it) to sundry parts of the House
 from one common *Furnace* ; I am
 ready to baptize them *Caliducts*, as
 well as they are termed *Venti-ducts*
 and *Aqua-ducts* that convey Winde
 and Water ; which whether it were a
 custome or a delicacie, was surely both
 for thrift, and for use, far beyond the
 German *Stoves* ; And I should prefer
 it likewise before our own fashion, if
 the very sight of a fire did not add to
 the Roome a kind of
Reputation, as old
Homer doth teach us
 in a verse, sufficient to
 prove

Αἰθομένη δὲ πυ-
 ρὸς γεραῖτερος
 οἶκος ἰδέσθαι. Hom.
Epigr.

prove that himself was not blind, as some would lay to his charge.

Touching *Conducts* for the *Swillage*, and other necessities of the House, (which how base soever in use, yet for health of the inhabitants, are as considerable, & perhaps more then the rest) I finde in our Authors, this Counsell; That *Art* should imitate *Nature*, in those ignoble conveyances; and separate them from Sight, (where there wants a running Water) into the most remote, and lowest, and thickest part of the *Foundation*; with secret vents passing up through the Walls like a *Tunnell* to the wilde Aire aloft: which all Italian Artizans commend for the discharge of noysome vapours, though else-where to my knowledge little practised.

Thus having considered the precedent *Aperriens*, or *Overtures*, in severallty, according to their particular Requisites, I am now come to the casting and *Contexture* of the whole *Work*, comprehended under the term of *Compartition*: Into which (being the mainest piece) I cannot enter without

a few generall Precautions, as I have done in other Parts.

First therefore, Let no man that intendeth to build, settle his Fancy upon a draught of the *Worke* in *paper*, how exactly soever measured, or neatly set off in *perspective*; And much less upon a bare *Plant* thereof, as they call the *Schiographia* or *Ground lines*; without a *Modell* or *Type* of the whole *Structure*, and of every parcell and Partition in *Pastbord* or *Wood*.

Next, that the said Model be as plain as may be, without colours or other beautifying, lest the pleasure of the *Eye* preoccupate the *Judgment*; which advise, omitted by the *Italian Architects*, I find in *Philippe de l'Orme*; and therefore (though *France* be not the *Theater* of best Buildings) it did merit some mention of his name.

Lastly, the bigger that this *Type* be, it is still the better, not that I will perswade a man to such an enormity, as that *Modell* made by *Antonio Labaco*, of Saint Peters Church in *Rome*, containing 22 foot in length, 16 in breadth, and 13 in height, and costing 4184 crowns:

crowns : The price, in truth, of a reasonable Chappel : Yet in a Fabrick of some 40. or 50. thousand pounds charge, I wish 30. pounds at least laid out before hand in an exact *Modell* ; for a little misery in the *Premises*, may easily breed some absurdity of greater charge, in the *Conclusion*.

Now, after these premonishments I will come to the *Compartition* it selfe, By which, the Authors of this *Art* (as hath been touched before) doe understand, a *gracefull* and *usefull* distribution, of the whole *Ground plot* both for roomes of *Office*, and of *Reception* or *Entertainment*, as far as the Capacity therof, and the nature of the *Country* will comport. Which circumstances in the present Subject, are all of main consideration, and might yeeld more discourse then an *Elementall Rapsodie* will permit. Therefore (to anatomize briefly this Definition) the *Gracefulness* (whereof we speake) will consist in double *Analogie*, or correspondencie. First between the *Parts* and the *Whole*, whereby a great *Fabrick* should have great *Partitions*, great
Lights,

Lights, great Entrances, great Pillars or Pylasters; In sum, all the Members great. The next between the Parts themselves, not only considering their Breadths, and Lengths, as before when we spake of Doors and Windows; but here likewise enters a third respect of Height, a point (I must confesse) hardly reduceable to any generall precept.

True it is, that the *Ancients* did determine the *Longitude* of all *Rooms*, which were longer then broad, by the double of their *Latitude*, *Vitruvius lib.6.cap.5.* And the *Height* by the half of the bredth and length summed together. But when the Room was precisely square, they made the *Height* half as much more as the *Latitude*; which *Dimensions* the modern *Architects* have taken leave to vary upon discretion: Somtimes squaring the *Latitude*, and then making the *Diagonal* or overthwart Line, from *Angle* to *Angle*, of the said *Square*; the measure of the *Height* somtimes more, but seldom lower then the full bredth it self; which boldnesse of quitting the old *Proportions*, some attribute first to *Michael*

chael Angelo da Buonaroti, perchance upon the credit he had before gotten in two other Arts.

The second Point is *Usefulness*, which will consist in a sufficient Number of Rooms, of all sorts, and in their apt *Coherence*, without *distracti*on, without *confusi*on; so as the beholder may not only call it, *Una Fabrica ben raccolta*, as *Italians* use to speak of well united Works; but likewise, that it may appear *airy* and *spiritous*, and fit for the welcome of chearfull Guests; about which the principall Difficulty will be in contriving the *Lights*, and *Stair-cases*, whereof I will touch a note or two: For the first, I observe that the ancient *Architects* were at much ease. For both the *Greeks* and *Romians* (of whose private dwellings *Vitruvius* hath left us some description) had commonly two *cloistered* open Courts, one serving for the *Womens* side, and the other for the *Men*; who yet perchance now adays would take so much separation unkindly. Howsoever, by this means, the reception of *Light* into the Body of the building,

was

was very prompt, both from without and from within : which we must now supply either by some open *Form* of the *Fabrick*, or among gracefull refuges, by *Tarrasing* any *Story* which is in danger of darknesse ; or lastly, by *perpendicular Lights* from the *Roof*, of all other the most naturall, as shall be shewed anon. For the second Difficulty, which is casting of the *Stair-cases* ; That being in it self no hard point, but only as they are incombrances of room for other use, (which lights were not) I am therefore aptly moved here to speak of them. And first of Offices.

I have marked a willingnesse in the *Italian Artisans*, to distribute the *Kitchen*, *Pantrie*, *Bakehouse*, *washing Rooms*: and even the *Buttery* likewise, under ground; next above the *Foundation*, and sometimes leuell with the plain, or *Floor* of the *Cellar*. raising the first Ascent into the house Fifteen Foot, or more for that End, which besides the benefit of removing such Annoies out of sight, and the gaining of so much more room above, doth also
by

by elevation of the *Front*, add *Majesty* to the whole *Aspect*. And with such a disposition of the principall *Stair-case*, which commonly doth deliver us into the *Plain* of the second *Story*, there may be wonders done with a little room, whereof I could alledge brave *Examples* abroad; and none more Artificiall and Delicious, then a House built by *Daniele Barbaro Patriarch* of *Aquileia*, before mentioned, among the memorable *Commenters* upon *Vitruvius*. But the *Definition* (above determined) doth call us to some consideration of our own Country; where though all the other petty *Offices* (before rehearsed) may well enough be so remote, yet by the naturall *Hospitality* of *England*, the *Buttery* must be more visible, and we need perchance for our *Raunges*, a more spacious and luminous *Kitchen* then the foresaid *Compartition* will bear; with a more competent nearnesse likewise to the *Dining Room*, or else besides other Inconveniences, perhaps some of the *Dishes* may straggle by the way; Hear let me note a common defect, that we have
of

of a very usefull *Roome*, called by the *Italians*, *Il Tinello*; and familiar, nay almost essentiall, in all their great *Families*. It is a Place properly appointed to conserve the meat that is taken from the Table, till the *Waiters* eat, which with us by an old fashion, is more unteemly set by in the mean while.

Now touching the distribution of *Lodging* chambers; I must here take leave to reprove a fashion, which I know not how, hath prevailed through *Italie*, though without ancient examples, as farr as I can perceive by *Vitruvius*. The thing I mean, is, that they so cast their *partitions*, as when all *Doors* are open, a man may see through the whole *House*, which doth necessarily put an intollerable servitude upon all the *Chambers* save the *Inmost*, where none can arrive but through the rest; or else the *Walles* must be extream thick for secret passages. And yet this also will not serve the turn, without at least *Three* doors to every *Roome*: A thing most insufferable in cold and windy Regions, and every where no small weakening to
the

the whole *Work*: Therefore with us that want no cooling, I cannot commend the direct opposition of such *Overtures*, being indeed meerely grounded upon the fond ambition of displaying to a *Stranger* all our *Furniture* at one *Sight*, which therefore is most maintained by them that mean to harbour but a few; whereby they make onely advantage of the *vanity*, and seldome prove the *Inconvinience*. There is likewise another defect (as absurdities are seldome solitarie) which will necessarily follow upon such a servile disposing of inward Chambers; That they must be forced to make as many common great *Roomes*, as there shall be severall *Stories*; which (besides that they are usually dark, a point hardly avoided, running as they do, through the middle of the whole *House*) do likewise devoure so much Place, that thereby they want other *Galleries*, and *Roomes of Retreate*, which I have often considered among them (I must confess) with no small wonder; nor I observe no *Nation* in the World, by nature more *private* and

and reserved, then the *Italian*; and on the other side, in no *Habitations* less *privacie*; so as there is a kind of Conflict between their *Dwelling* and their *Being*: It might here perchance be expected, that I should at least describe (which others have done in *draughts* and *designes*) divers *Formes* of *Plants* and *Partitions*, and varities of *Inventions*, But speculative *Writers* (as I am) are not bound to comprise all particular Cases within the Latitude of the *Subject* which they handle; Generall Lights, and *Directions*, and pointings at some faults, is sufficient. The rest must be committed to the sagacity of the *Architect*, who will be often put to divers ingenious shifts, when he is to wrestle with scarcity of *Ground*. As

The *Italians* call it *una stanza dannata*, as when a Buttery is cast under a stayre-Cafe or the like.

sometimes * to damm one Room (though of speciall use) for the benefit and beauty of all the rest; Another while, to make those fairest, which are most in *Sight*, and to leave the other (like a cunning Painter) in shadow, *cum multis aliis*, which it

it were infinite to pursue. I will therefore close this Part touching *Comparison*, as chearfully as I can, with a short description of a *Feasting* or *entertaining Room*, after the *Ægyptian* manner, who seem (at least till the time of *Vitruvius*) from the ancient *Hebrews* and *Phenicians* (whence all knowledge did flow) to have retained, with other *Sciences*, in a high degree, also the *Principles*, and *practice* of this magnificent *Art*. For as far as I may conjecture by our Masters Text, *lib.6. cap.5* (where as in many other places he hath tortured his *Interpreters*) there could no *Form* for such a Royall Use be comparably imagined like that of the foresaid *Nation*, which I shall adventure to explain.

Let us conceive a *Floor* or *Area* of goodly length, (for example at least of 120. foot) with the *breadth* somewhat more then the half of the *Longitude*, whereof the reason shal be afterwards rendred. About the two longest Sides and Head of the said *Room* shall run an Order of *Pillars*, which *Palladio* doth suppose *Corinthian*, as I see by his

M

de-

design) supplying that point out of *Greece*, because we know no *Order* proper to *Egypt*. The Fourth Side I will leave free for the *Entrance*: On the foresaid *Pillars* was laid an *Architrave*, which *Vitruvius* mentioneth alone: *Palladio* adds thereunto (and with reason) both *Freeze* and *Cornice*, over which went up a continued *Wall*, and therein half or three quarter *Pillars* answering directly to the *Order* below but a fourth Part lesse; and between these half *Columnes* above the whole Room was windowed round about.

Now, from the lowest *Pillars* there was laid over a *Contignation* or Floor born upon the outward *Wall*, and the *Head* of the *Columns* with *Tarrace* and *Pavement*, *Sub dio* (saith our Master;) and so indeed he might safely determine the matter in *Egypt*, where they fear no *Clouds*: Therefore *Palladio*, (who leaveth this *Tarrace* uncovered in the middle, and ballised about) did perchance construe him rightly, though therein discording from others: Always we must understand a sufficient breadth of *Pavement* left between the
open

open part and the *Windows*, for some delight of Spectatours, that might look down into the *Room*: The *Latitude* I have supposed, contrary to some former Positions, a little more then the half of the length; because the Pillars standing at a competent distance from the outmost *Wall*, will, by interception of the *Sight*, somewhat in appearance diminish the breadth; In which cases, (as I have touched once or twice before) *Discretion* may be more licentious then *Art*. This is the description of an *Egyptian* room for *Feasts* and other *Jollities*. About the *Walls* whereof we must imagine entire *Statues* placed below, and illuminated by the descending Light from the *Tarrace*, as likewise from the *Windows* between the half Pillars above. So as this *Room* had abundant and advantageous *Light*; and besides other garnishing, must needs receive much *State* by the very height of the *Roof*, that lay over two Orders of *Columnes*. And so having run through the four parts of my first generall *Division*, namely, *Foundations*, *Walls*, *Aperti-*

ons, and *Compartition*; the *House* may now have leave to put on his *Hat*; having hitherto been uncovered itself, and consequently unfit to cover others. Which point, though it be the last of this Art in execution, yet it is always in *Intention* the first: For who would build but for *Shelter*? Therefore obtaining both the *Place*, and the dignity of a *Finall Cause*, it hath been diligently handled by divers, but by none more learnedly then *Bernardino Baldi* Abbot of *Guaſtalla* (before cited upon other occasion) who doth fundamentally, and *Mathematically* demonstrate the firmest *Knittings* of the upper *Timbers*, which make the *Roof*. But it hath been rather my *Scope*, in these *Elements*, to fetch the ground of all from *Nature* her self, which indeed is the simplest Mother of Art. Therefore I will now only deliver a few of the properest, and (as I may say) of the naturallest considerations that belong to this remaining *Piece*.

There are two *Extremities* to be avoided in the *Cover*, or *Roof*: That it be not too *heavy*, nor too *light*. The first

first, will suffer a vulgar objection of pressing too much the under-work. The other containeth a more secret inconvenience; for the *Cover* is not only a bare defence, but likewise a kind of *Band* or *Ligature* to the whole *Fabrick*, and therefore would require some reasonable weight. But of the two extreams, a House *Top-heavy* is the worst. Next, there must be a care of *Equality*, that the *Edifice* be not pressed on the one side more then on the other; and here *Palladio* doth wish (like a cautelous Artizan) that the inward Walls might bear some good share in the burthen, and the outward be the lesse charged.

Thirdly, the *Italians* are very precise in giving the *Cover* a gracefull *pendence* of *sloapnesse*, dividing the whole breadth into nine Parts; whereof two shall serve for the elevation of the highest *Toppe* or *Ridge* from the lowest. But in this Point the quality of the *Region* is considerable: For (as our *Vitruvius* insinuateth) those *Climes* that fear the falling and lying of much *Snow*. ought to provide more inclining

Pentices: and *Comelineſſe* muſt yeild to *Neceſſity*.

THEſe are the uſefulleſt Cautions which I find in *Authours*, touching the laſt *Head* of our *Division*, where-with I will conclude the firſt Part of my preſent *Travel*. The ſecond remaineth concerning *Ornaments* within, or without the *Fabrick*: A Piece not ſo dry as the meer *Contemplation* of *Proportions*. And therefore I hope therein ſomewhat to reſreſh both the *Reader*, and my ſelf,

OF



OF
THE ELEMENTS
OF
ARCHITECTURE,

The Second Part.

VERY Mans proper
Mansion House and
Home, being the Thea-
ter of his Hospitality,
the Seate of Self-fruiti-
on, the Comfortablest part of his own
Life, the noblest of his Sons Inheri-
tance, a kind of private Princedome;
Nay, to the Possessors thereof, an E-
pitomie of the whole World; may well
deserve

deserve by these *Attributes*, according to the degree of the *Master*, to be *decently* and *delightfully* adorned. For which end, there are two *Arts* attending on *Architecture*, like two of her principall *Gentlewomen*, to *dress* and *trimme* their *Mistress*; P I C T U R E and S C U L P T U R E: Between whom, before I proceed any further, I will venture to determine an ancient quarrell about their *Precedency*, with this *Distinction*; that in the garnishing of *Fabricks*, *Sculpture* no doubt must have the *preheminance*, as being indeed of neerer affinity to *Architecture* it self, and consequently the more naturall, and more sutable *Ornament*. But on the other side, (to consider these two *Arts* as I shall do *Philosophically*, and not *Mechanically*) An excellent Piece of *Painting*, is, to my judgment, the more admirable *Object*, because it come neer an *Artificiall Miracle*, to make diverse distinct *Eminences* appear upon a *Flat* by force of *Shadows*, and yet the *Shadows* themselves not to appear: which I conceive to be the uttermost value and vertue of a *Painter*,
and

and to which very few have arrived in all *Ages*.

In these two *Arts* (as they are applicable to the *Subject* which I handle) it shall be fit first to consider how to *choose* them ; and next how to *dispose* them. To guide us in the *choyce*, we have a *Rule* somewhere (I well remember) in *Pliny*, and it is a pretty observation ; That they do mutually help to censure one another. For *Picture* is best when it standeth off, as if it were carved ; and *Sculpture* is best when it appeareth so *tender*, as if it were *painted* : I mean, when there is such a seeming softness in the *Limbes*, as if not a *Chissell* had hewed them out of *Stone*, or other *Materiall*, but a *Pensill* had drawn and stroaked them in *Oyl* ; which the judicious *Poet* took wel to his *Fancy*.

Excudent alii spirantia mollius æra.

But this generality is not sufficient to make a good *choofer*, without a more particular contraction of his *Judgement*. Therefore when a *Piece of Art* is set before us, let the first *Caution* be, not to ask who made it, least the

Fame of the *Author* doe Captivate the *Fancie* of the *Buyer*. For, that excellent men doe alwaies excellently, is a false Conclusion; wherupon I observe among *Italian* Artizans three notable *Phrases*, which well decipher the degrees of their *Works*.

They will tel you, that a thing was done *Con diligenza*, *Con studio*, and *Con Amore*; The first is but a bare and ordinary diligence, The second is a learned diligence; The third is much more, even a loving diligence: They mean not with love to the *Bespeaker* of the *Worke*, but with a love and delight in the *Worke* it selfe, upon some speciall *Fancy* to this, or that *Story*; And when all these concur (particularly the last) in an eminent *Author*, Then perchance *Titianus fecit*, or *ὁ φίδριος ἐποίησεν* will serve the turn, without farther *Inquisition*; Otherwise Artizans have not only their *Growths* and *Perfections*, but likewise their *Vains* and *Times*.

The next Caution must be (to proceed *Logically*) that in judging of the *Work* it self, we be not distracted with too many things at once; Therefore

fore first (to beginne with *Picture* :) we are to observe whether it be well drawn, (or as more elegant *Artizans* term it) well *Design'd* ; Then, whether it be well *Coloured*, which be the two generall *Heads* ; And each of them hath two principall *Requisites* ; For in well *Designing*, there must be *Truth* and *Grace* ; In well *Colouring*, *Force* and *Affection* ; All other *Praises* are but *Consequences* of these.

Truth (as we Metaphorically take it in this Art) is a *Just* and *Natural Proportion* in every Part of the determined Figure. *Grace* is a certain *free Disposition* in the whole *Draught*, answerable to that unaffected Franknesse of *Fashion* in a living *Body*, Man or Woman, which doth animate Beauty where it is, and supply it, where it is not.

Force consisteth in the *Roundings* and *Raisings* of the *Work*, according as the *Limbs* do more or lesse require it ; So as the *Beholder* shall spie no *sharpnesse* in the bordering *Lines* ; As when *Taylors* cut out a *Sute*, which *Italians* do aptly term according to that comparison, *Contorni taglianti* ; Not any flat-
nesse

nesse within the *Bodie* of the *Figure*, which how it is done, we must fetch from a higher *Discipline*; For the *Opticks* teach us. That a *plaine* will appear *prominent*, and (as it were) *embossed*, if the *Parts* farthest from the *Axel-tree*, or middle *Beam* of the *Eye*, shall be the most shadowed; Because in all *Darknesse*, there is a kind of *Deepnesse*. But as in the Art of *perswasion*, one of the most *Fundamentall Precepts* is the *Concealment* of Art; So here likewise, the *Sight* must be sweetly deceived by an insensible passage, from *brighter* colours to *dimmer*, which *Italian Artizans* call the *middle Tinctures*; That is, Not as the *whites* and *yolkes* of *Egs* lie in the *Shel*, with visible distinction; But as when they are *beaten*, and *blended* in a *Dish*, which is the nearest comparison that I can suddenly conceive.

Lastly, *Affection* is the *Lively Representment* of any *passion* whatsoever, as if the *Figures* stood not upon a *Cloth* or *Board*, but as if they were *acting* upon a *Stage*; And here I must remember, in truth with much marvell, a note which.

which I have received from excellent *Artizans*, that though Gladnesse and Grief be *opposites* in Nature; yet they are such *Neighbours* and *Confiners* in Art, that the least touch of a *Penfill* will translate a *crying*, into a *laughing* Face; as it is represented by *Homer* in the person of *Hectors* wife; as Painters and Poets have always had a kind of congeniality,

Ι Λ Ι Α Δ. ζ.

Ὡς εἰπὼν ἀλόχοιε φίλης ἐν χέρσιν ἔθηκε,
 Παῖδ' ἔδν, ἥδ' ἄρα μὲν κηῶδεϊ δέξατο κόλπῳ
 Δακρύειν γελᾶσασα. ——— That is,

*She took her son into her arms, weep-
 ingly laughing.*

Which Instance, besides divers other, doth often reduce unto my memory that ingenuous Speculation of the Cardinal *Cusanus*, extant in his Works, touching the coincidence of *Extremes*. And thus much of the four *Requisites*, and *Perfections* in *Picture*.

In *Sculpture* likewise, the Two first are absolutely necessary; The third impertinent; For *Solid* Figures need no elevati-

elevation, by force of *Lights*, or *Shadows*; Therefore in the Room of this, we may put (as hath been before touched) a kind of *Tenderneſſe*, by the *Italians* termed *Morbidezza*, wherein the *Chizell*, I muſt confeſſe, hath more glory then the *Penſil*; that being ſo hard an *Inſtrument*, and working upon ſo unpliant ſtuſſe, can yet leave *Strokes* of ſo gentle appearance.

The Fourth, which is the expreſſing of *Affection* (as farre as it doth depend upon the *Activity* and *Geſture* of the *Figure*) is as proper to the *Carver*, as to the *Painter*; though *Colours*, no doubt, have therein the greateſt power; whereupon, perchance, did firſt grow with us the *Faſhion* of colouring, even *Regall Statues*, which I muſt take leave to call an *Engliſh Barbariſme*.

Now in theſe four *Requiſites* already rehearſed, it is ſtrange to note, that no *Artizan*, having ever been blamed for exceſſe in any of the three laſt; only *Truth* (which ſhould ſeem the moſt *Innocent*) hath ſuffered ſome *Objection*; and all *Ages* have yeelded ſome one or two *Artificers* ſo prodigiouſly
ex-

exquisite, that they have been reputed too *Naturall* in their *Draughts*; which will well appear by a famous passage in *Quintillian*, touching the *Characters* of the ancient *Artizans*, falling now so aptly into my memory, that I must needs translate it, as in truth it may well deserve.

The place which I intend, is extant in the last *Chapter* save one of his whole *Worke*, beginning thus in *Latine*;

Primi, quorum quidem opera non venustatis modo gratiâ visenda sunt clari Pictores, fuisse dicuntur Polygnotus atque Aglaophon, &c.

The whole *Passage* in *English*
standeth thus.

THE first *Painters* of Name, whose *Workes* be considerable for any thing more then only *Antiquity*, are said to have been *Polygnotus* and *Aglaophon*; whose bare *Colouring* (he means I think in *white* and *black*) hath even yet so many followers, that those rude and first *Elements*, as it were

were of that, which within a while, became an Art, are preferred before the greatest *Painters* that have been extant after them, out of a certain *Competition* (as I conceive it) in point of *Judgement*. After these, *Zeuxes* and *Parafius* not far distant in age, both about the time of the *Peloponnesian War*, (for in *Xenophon* we have a Dialogue between *Parafius* and *Socrates*) did add much to this *Art*. Of which the first is said to have invented the due disposition of *Lights* and *Shadows*; The second, to have more subtilly examined, the *Truth* of *Lines* in the *Draught*; for *Zeuxes* did make *Limbs* bigger then the *life*; deeming his *Figures*, thereby the more stately and Majestical; and therein (as some think) imitating *Homer*, whom the stoutest Form doth please, even in *Women*. On the other side, *Parafius* did exactly limit all the Proportions so, as they call him the *Law-giver*, because in the *Images* of the *Gods*, and of *Heroical Personages*, others have followed his Patterns like a *Decree*; But *Picture* did most flourish about the days of *Philip*, and even to the

the Successours of *Alexander* ; yet by sundry *Habilities* ; for *Protogenes* did excell in *Diligence* ; *Pamphilus* and *Melanthius* in due *Proportion* ; *Antiphilus* in a frank *Facility* ; *Theon* of *Samos* , in strength of *Fantasie* and conceiving of *Passions* ; *Apelles* , in *Invention* and *Grace* , whereof he doth himself most vaunt ; *Euphranor* deserves admiration , that being in other excellent *Studies* a principall Man , he was likewise a wondrous Artizan , both in *Painting* and *Sculpture* . The like difference we may observe among the *Statuaries* ; for the works of *Calon* and *Egesias* were somewhat *stiffe* , like the *Tuscan Manner* ; Those of *Calamis* not done with so cold *stroaks* ; And *Myron* more *tender* then the former ; a diligent *Decency* in *Polycletus* above others ; to whom though the highest prayse be attributed by the most , yet lest he should go free from exception , some think he wanted *solemnesse* ; for as he may perchance be said to have added a comely *Dimension* to humane shape , somewhat above the *truth* ; so on the other side , he seemed not to have fully expressed
the

the *Majesty* of the *Gods*: Moreover, he is said not to have meddled willingly with the *graver age*, as not adventuring beyond *smooth cheeks*: But these virtues that were wanting in *Policlerus*, were supplied by *Phidias* and *Alcmenes*; yet *Phidias* was a better Artizan in the representing of *Gods*, then of *Men*; and in his works of *Ivory*, beyond all emulation, even though he had left nothing behind him but his *Minerva* at *Athens*, or the *Olympian Jupiter* in *Elis*, whose *Beauty* seems to have added somewhat, even to the received *Religion*; the *Majesty* of the *Work*, as it were, equalling the *Deity*. To *Truth*, they affirm *Lysippus* and *Praxiteles*, to have made the nearest approach: for *Demetrius* is therein reprehended, as rather exceeding then deficient; having been a greater aimmer at *Likeness*, then at *Loveliness*.

This is that witty Censure of the ancient Artizans which *Quintillian* hath left us, where the last *Character* of *Demetrius* doth require a little *Philosophical Examination*; How an *Artificer*, whose end is the *Imitation* of *Nature*,

ture, can be too *naturall*; which likewise in our days was either the fault, or (to speak more gently) the too much perfection of *Albert Durer*, and perhaps also of *Michael Angelo da Buonaroti*, between whom I have heard noted by an ingenuous Artizan a pretty nice difference, that the *German* did too much expresse *that which was*; and the *Italian*, *that which should be*: Which severe Observation of *Nature*, by the one in her *commonest*, and by the other in her *absolute* Forms, must needs produce in both a kind of *Rigidity*, and consequently more *Naturalnesse* then *Gracefulness*: This is the clearest reason, why some exact *Symmetrists* have been blamed for being too true, as near as I can deliver my conceit. And so much touching the choice of *Picture* and *Sculpture*: The next is, the application of both to the *beautifying* of *Fabricks*.

First therefore, touching *Picture*, there doth occurre a very pertinent doubt, which hath been passed over too slightly, not only by some *Men*, but by some *Nations*; namely, whether
this

this *Ornament* can well become the *Out-side* of *houses*, wherein the *Germans* have made so little scruple, that their best *Towns* are the most painted, as *Augusta* and *Norembergh*. To determine this question in a word It is true, that a *Story* well set out with a good *Hand*, will every where take a *Judicious* eye: But yet withall it is as true, that various colours on the *Out-walles* of *Buildings* have alwayes in them more *Delight* then *Dignity*: Therefore I would there admit no *Paintings* but in *Black* and *White*, nor even in that kinde any *Figures* (if the roome be capable) under *Nine* or *Ten* foot high, which will require no ordinary *Artizan*; because the faults are more visible then in small *Designes*. In unfigured *paintings* the noblest is the imitation of *Marbles*, and of *Architecture* it self, as *Arches*, *Treexes*, *Columnes*, and the like.

Now for the *Inside*, here growes another doubt, wherein *Grotesca* (as the *Italians*) or *Antique* work (as we call it) should be received, against the expresse authority of *Vitruvius* himself, *lib. 7. cap. 5.* where *Pictura* (saith he)

he) *fit ejus, quod est, seu potest esse*; excluding by this severe definition, all *Figures* composed of different *Natures* or *Sexes*; so as a *Syrene* or a *Centaure* had been intolerable in his eye: But in this we must take leave to depart from our Master; and the rather, because he spake out of his own Profession, allowing *Painters* (who have ever been as little limited as *Poets*) a lesse scope in their imaginations, even then the gravest *Philosophers*, who sometimes do serve themselves of *Instances* that have no *Existence* in *Nature*; as we see in *Plato's Amphisbæna*, & *Aristotles Hirco-Cervus*. And (to settle this point) what was indeed more common and familiar among the *Romanes* themselves, then the *Picture* and *Statue* of *Terminus*, even one of their *Deities*? which yet if we well consider, is but a piece of *Grotesca*; I am for these reasons unwilling to impoverish that Art, though I could wish such *medlie* and *mottie* *Designes* confined only to the *Ornament* of *Freezes*, and *Borders*, their properest place. As for other *Storied Workes* upon *Walles*, I doubt our *Clime* be

too yeelding and moist for such *Garnishment* ; therefore leaving it to the Dwellers discretion according to the quality of his Seat, I will only add a Caution or two about the disposing of *Pictures* within.

First, That no Room be furnished with too many ; which, in truth, were a Surfet of *Ornament*, unlesse they be Galleries, or some peculiar *Repository* for Rarities of Art.

Next, That the best Pieces be placed not where there are the *least*, but where there are the *fewest lights* : therefore not only Rooms windowed on both ends, which we call through-lighted ; but with two or moe windows on the same side, are enemies to this *Art* : and sure it is, that no Painting can be seen in full perfection, but (as all Nature is illuminated) by a *single Light*.

Thirdly, That in the *placing* there be some care also taken how the *Painter* did stand in the *working*, which an intelligent *Eye* will easily discover ; and that *posture* is the most natural : so as *Italian* Pieces will appear best in a Room where the Windows are high, because

because they are commonly made to a descending Light, which of all other doth set off mens Faces in their truest spirit.

Lastly, That they be as properly bestowed for their *quality*, as *fitly* for their *grace*: that is, *chearefull* Paintings in *Feasting* and *Banquetting* Rooms, *Graver Stories* in *Galleries*; *Land-skips* and *Bosage*, and such *wilde* works, in open *Tarraces*, or in *Summer houses* (as we call them) and the like.

And thus much of *Picture*, which let me close with this Note; that though my former Discourse may serve perchance for some reasonable *leading* in the choice of such delights; yet let no man hope by such a *speculative* erudition, to discern the *Masterly* and *mysterious* touches of *Art*, but an Artizan himself; to whom therefore we must leave the *prerogative* to censure the manner & handling, as he himself must likewise leave some points, perchance of no lesse value, to others; as for example, whether the *Story* be rightly *represented*, the *Figures* in true *action*, the *Persons* *futed* to their several qualities,
the

the *affections* proper and *strong*, and such like Observations.

Now for *Sculpture*, I must likewise begin with a Controversie, as before (falling into this Place;) or let me rather call it a very meer *Fancy* strangely taken by *Palladio*, who having noted in an old Arch or two at *Verona*, some part of the *Materials* already cut in fine *Forms*, and some *unpolished*, doth conclude (according to his *Logick*) upon this particular, that the Ancients did leave the outward *Face* of their *Marbles* or *Free-stone* without any *Sculpture*, till they were laid and cemented in the Body of the Building; For which likewise he findeth a reason (as many do now and then very wittily, even before the thing it self be true) that the *Materials* being left *rough* were more managable in the *Masons* hand, then if they had been *smooth*; And that so the *sides* might be laid together the more exactly; Which Conceit, once taken, he seems to have further imprinted, by marking in certain Storied *Sculptures* of old time, how precisely the Parts and Lines
of

of the *Figures* that pass from one Stone to another, do meet; which he thinks could hardly fall out so right, (forgetting while he speakes of *ancient* things, the ancient *Diligence*) unless they had been cut after the joyning of the *Materials*. But all these *Inducements* cannot countervaille the sole *Inconvenience* of *shaking* and *Disjoynting* the *Commissures* with so many Strokes of the *Chizell*, besides an *Incommodious* Working on *Scaffolds*; especially having no testimony to confirme it, that I have yet seen, among the records of *Art*: Nay, it is indeed rather true, that they did *square*, and *carve*, and *polish* their *Stone* and *Marble* Works, even in the very *Cave* of the *Quarry*, before it was hardened by open Aire: But (to leave disputation) I will set down a few *Positive* notes for the placing of *Sculpture*; because the chusing hath been handled before

That first of all, it be not too *generall* and *abundant*, which would make a *House* look like a *Cabinet*: and in this point, *moral Philosophy*, which tempereth *Fancies*, is the *Superintendent* of
Art N *That*

That especially, there be a due moderation of this *Ornament* in the first approach; where our Authors do more commend (I mean about the Principall Entrance) a *Dorique*, then a *Corinthian* garnishment; So as if the great *Doore* be *Arched* with some brave *Head*, cut in fine *Stone* or *Marble* for the *Key* of the *Arch*, and two *Incumbent* Figures gracefully leaning upon it towards one another, as if they meant to conferr, I should thinke this a sufficient Entertainment for the first Reception of any judicious Sight, which I could wish seconded with two great standing *Statues* on each side of a paved way that shall lead up into the *Fabrick*, so as the Beholder at the first entrance may passe his Eye between them.

That the *Nices*, if they contain *Figures* of white *Stone* or *Marble*, be not coloured in their *Concavity* too black, For though *Contraria juxta se posita magis illucescunt* (by an old Rule); yet it hath been subtilly, and indeed truly noted, that our *Sight* is not well contented with those sudden departments
from

from one extreame to another: Therefore let them have rather a *Dusky* Tincture, then an absolute *black*.

That *fine* and delicate *Sculptures* be helped with *Neer*ness, and *Gross* with *distance*; which was well seen in the old controversie between *Phidias* and *Alcmenes* about the *Statue* of *Venus*: wherein the First did shew discretion, and save labour, because the *Work*e was to be veiwed at good *Height*, which did drown the sweet and diligent strokes of his *Adversary*: A famous emulation of two principall *Artizans*, celebrated even by the *Greek* Poets.

That in the placing of standing *Figures* aloft, we must set them in a *Posture* somewhat bowing forward; because (saith our Master, *lib.3.cap.3.* out of a better *Art* then his own) the *visuall beam* of our eye, extended to the *Head* of the said *Figures*, being longer then to the *Foot*e, must necessarily, make that *part* appear *farther*; so as to reduce it to an erect or upright *position*, there must be allowed a due advantage of *stooping* towards us which

Albert Durer hath exactly taught in his fore-mentioned *Geometry*. Our *Vitruvius* calleth this affection in the *Eye*, a *resupination* of the *Figure*: For which word (being in truth his own, for ought I know) we are almost as much beholding to him, as for the *Observation* it self: And let thus much summarily suffice touching the choice and use of these adorning Arts. For to speak of garnishing the *Fabrick* with a *Row* of erected *Statues* about the *Cornice* of every *Contignation* or *Story*, were discourse more proper for *Athens* or *Rome*, in the time of their true greatnesse, when (as *Plinie* recordeth of his own Age) there were near as many carved *Images*, as living *Men*; like a noble contention, even in point of *Fertility*, between *Art* and *Nature*; which passage doth not only argue an infinite abundance, both of *Artizans* and *Materials*; but likewise of *Magnificent* and *Majestickall* Desires in every common person of those times, more or lesse, according to their *Fortunes*. And true it is indeed, that the *Marble Monuments & Memories* of wel
de-

deserving Men, wherewith the very high ways were *strewed* on each side, was not a bare and transitory Entertainment of the *Eye*, or only a gentle deception of *Time* to the *Traveller* : But had also a secret and strong *Influence*, even into the advancement of the *Monarchy*, by continuall representation of vertuous Examples ; so as in that point, *A R T* became a piece of *State*.

Now, as I have before subordinated *Picture* and *Sculpture* to *Architecture*, as their *Mistresse* ; so there are certain inferiour *A R T s* likewise subordinate to them ; As under *Picture*, *Mosaique* ; under *Sculpture*, *Plastique* ; which two I only nominate, as the fittest to garnish *Fabricks*.

Mosaique is a kind of *Painting* in small *Pebbles*, *Cockles* and *Shels* of sundry colours ; and of late days likewise with pieces of *Glasse* figured at pleasure ; an *Ornament*, in truth, of much beauty, and long life ; but of most use in *pavements* and *floorings*.

Plastique is not only under *Sculpture*, but indeed very *Sculpture* it self :

but with this difference; that the *Plasterer* doth make his Figures by *Addition*, and the *Carver* by *Subtraction*; wherupon *Michael Angelo* was wont to say somewhat pleasantly, That *Sculpture* was nothing but a *purgation of superfluities*. For take away from a piece of wood or stone all that is *superfluous*, and the remainder is the intended *Figure*. Of this *plastick Art*, the chief use with us is in the gracefull *fretting* of *Roofs*: But the *Italians* apply it to the *mantling* of *Chimneys* with great Figures. A cheap piece of *Magnificence*, and as durable almost within doors, as harder *Forms* in the weather. And here, though it be a little excursion, I cannot passe unremembred again, their manner of disguising the shafts of *Chimneys* in various fashions, whereof the noblest is the *Pyramidall*; being in truth a piece of polite and civill discretion, to convert even the *conduits* of soot and smoak into *Ornaments*; whereof I have hitherto spoken as far as may concern the Body of the Building.

Now there-are *Ornaments* also without,

out as *Gardens, Fountains, Groves, Conservatories* of rare *Beasts, Birds, and Fishes*. Of which ignobler kind of *Creatures*, We ought not (saith our greatest

Master among the *Sons of Nature*) childishly to de-

spise the *Contem-* Arist. lib. 1. cap. 5.
plation; for in all de part. Anim. Σε μὴ
things that are συγγράμειν παιδικῶς
naturall, there is τῷ καὶ τῷ ἀτιμολέπων
ever something that ζῶν ὁτιοῦν. Ἐν
is admirable. Of πᾶσι γὰρ τοῖς φυσικοῖς
ἐν ἐστὶ τι θαυμάσιον.

these external delights a word or two.

First, I must note a certain contrariety between *building & gardening*: For as *Fabricks* should be regular, so *Gardens* should be irregular, or at least cast into a very wild *Regularity*. To exemplifie my conceit; I have seen a *Garden* (for the maner perchance incomparable) into which the first *Accesse* was a high walk like a *Tarrace*, from whence might be taken a generall view of the whole *Plot* below, but rather in a delightfull confusion, then with any plain distinction of the pieces. From this the *Beholder* descending many steps, was afterwards conveyed again by severall *mountings*

and *valings*, to various entertainments of his *sens* and *sight* : which I shall not need to describe (for that were poetical) let me only note this, that every one of these diversities, was as if he had bin *Magically* transported into a new *Garden*.

But though other *Countries* have more benefit of Sun then we, and thereby more properly tied to contemplate this delight ; yet have I seen in our *own*, a delicate and diligent *curiosity*, surely without *parallel* among forraign *Nations* : Namely, in the Garden of Sir Henry Fansham, at his Seat in *Ware Park* ; where I wel remember, he did so precisely examine the *tinctures* and *seasons* of his *flowrs*, that in their *settings*, the *inwardst* of those which were to come up at the same time, should be always a little *darker* then the *outmost*, and so serve them for a kind of gentle *shadow*, like a piece, not of *Nature*, but of *Art* : which mention (incident to this place) I have willingly made of his *Name*, for the dear *friendship* that was long between us : though I must confesse, with much wrong to his other *vertues* ; which deserve a more solid

Memo-

Memoriall, then among these vacant *Observations*. So much of *Gardens*.

Fountains are figured, or only plain *Water'd-works*: Of either of which, I will describe a matchlesse pattern.

The first, done by the famous hand of *Micael Angelo da Buonaroti*, in the figure of a sturdy woman, washing and winding of linnen clothes; in which Act, she wrings out the water that made the *Fountain*; which was a gracefull and natural conceit in the Artificer, implying this rule; That all *designs* of this kind, should be proper.

The other doth merit some larger expression; There went a long, straight, mossie walk of competent breadth, green, and soft under foot; listd on both sides with an *Aquaduct* of white stone, brest-high, which had a hollow channell on the top, where ran a prety trickling stream; on the edge whereof, were couched very thick all along, certain small pipes of lead, in little holes; so neatly, that they could not be well perceived, till by the turning of a cock, they did sprout over interchangeably from side to side, above mans height.

in form of *Arches*, without any intersection or meeting aloft, because the pipes were not exactly opposite; so as the *Beholder*, besides that which was fluent in the *Aqueducts* on both hands in his view, did walk, as it were, under a continuall *Bower* and *Hemisphere* of water, without any drop falling on him. An *invention* for refreshment, surely far excelling all the *Alexandrian* Delicacies, and *Pneumaticks* of *Hero*.

Groves, and artificiall Devices under ground, are of great expence, and little dignity; which for my part, I could wish converted here into those *Crypteria*, wherof mention is made among the curious provisions of *Ticho Braghe* the *Danish Ptolomie*, as I may well call him: which were deep *concaves* in Gardens, where the *Stars* might be observed even at *noon*. For (by the way) to think that the brightness of the *Suns* body above, doth drown our discerning of the lesser lights, is a popular error; the sole impediment being that lustre, which by *reflection*, doth spread about us from the face of the Earth; so as the *caves* before touched, may well conduce, not
to

to a delicious, but to a learned pleasure.

In *Aviaries* of wire, to keep Birds of all sorts, the *Italians* (though nowastfull Nation) do in some places bestow vast expence ; including great scope of ground, variety of *bushes*, *trees* of good height, running *waters*, and sometime a *Stove* annexed, to contemper the *Air* in Winter. So as those *Chanteresses*, unlesse they be such as perhaps delight as much in their wing, as in their voice, may live long among so good provisions, and room, before they know that they are *prisoners* ; reducing often to my memory that conceit of the *Roman Stoick*, who in comparison of his own free *contemplations*, did think divers great and splendid fortunes of his time, little more then *commodious captivities*.

Concerning *Ponds* of pleasure near the habitation ; I will referre my self to a grave *Author* of our own (though more illustrious by his other
 *work) namely, *Sarisbury- De nugis*
ensis de Piscinâ. Curial. &c.

And here I will end the second part touching *Ornaments*, both *within*, and *without* the *Fabrack*,

Now

Now, as almost all those which have delivered the *Elements* of *Logick*, do usually conclude with a Chapter touching *Method*; so I am here seized with a kind of critical spirit, and desirous to shut up these building *Elements* with some *Methodicall* direction how to *censure* *Fabricks* already raised: for indeed, without some way to contract our *Judgement*, which among so many particulars would be lost by diffusion I should think it almost harder to be a good *Censurer*, then a good *Architect*: Because the *Working* part may be helped with *Deliberation*, but the *Judging* must flow from an *extemporall habit*. Therefore (not to leave this last *Piece* without some *Light*) I could wish him that cometh to examine any nobler *Work*, first of all to examine himselfe, whether perchance the sight of many brave things before (which remain like impressed forms) have not made him apt to think nothing good but that which is the best: for this *humour* were too sowre. Next, before he come to settle any imaginable opinion, let him by all means seek to inform himself

self precisely, of the Age of the *Worke* upon which he must passe his *Doom*. And if he shall finde the apparant *Decays* to exceed the proportion of *Time*; then let him conclude without farther inquisition, as an absolute Decree, that either the *Materials* were too *slight*, or the *Seate* is nought. Now, after these premisses, if the *House* be found to bear his *yeares* well, (which is always a token of sound *constitution*) Then let him suddenly runne backwards, (for the *Method* of *censuring* is contrary to the *Method* of *composing*) from the *Ornaments* (which first allure the *Eye*) to the more essential *Members*, till at last he be able to forme this *Conclusion*, that the *Worke* is *Commodious*, *Firme*, and *Delightfull*; which (as I said in the beginning) are the three capitall *Conditions* required in good *Buildings*, by all *Authors*, both Ancient and Moderne. And this is, as I may term it, the most *Scientificall* way of *Censuring*. There are two other which I must not forget: The first in *Georgio Vassari*, before his laborious *Work* of the lives of *Architects*, which is to passe a running

ning examination over the whole *E-difice*, according to the properties of a well shapen *Man*. As whether the *Wals* stand upright upon clean footing and *Foundation*; whether the *Fabrick* be of a beautifull *Stature*; whether for the *breadth* it appear well *burnished*; whether the principall *Entrance* be on the middle *Line* of the *Front* or *Face*, like our *Mouthes*; whether the *Windowes*, as our *Eyes*, be set in equall number and distance on both sides; whether the *Offices*, like the *Veins* in our *Bodies*, be usefully distributed, and so forth. For this *Allegoricall* review may be driven as farre as any *Wit* will, that is at leasure.

The second way is in *Vitruvius* himself, *lib. 1. cap. 2.* where he summarily determineth six *Considerations*, which accomplish this whole *Art*.

Ordinatio.

Dispositio.

Eurythmia.

Symmetria.

Decor, and.

Distributio.

Whereof (in my conceit) we may
spare

spare him the first two; for as farre as I can perceive, either by his *Interpreters*, or by his own *Text* (which in that very place, where perchance he should be *clearest*, is of all other the *cloudiest*) he meaneth nothing by *Ordination*, but a well setting of the *Modell* or *Scale* of the whole *Worke*. Nor by *Disposition*, more then a neat and full expression of the first *Idea* or *Designement* thereof; which perchance do more belong to the *Artificer*, then to the *Censurer*. The other four are enough to condemne, or absolve any *Fabrick* whatsoever. Whereof *Eurythmia* is that agreeable *Harmony* between the breadth, length, and height of all the *Roomes* of the *Fabrick*, which suddenly, where it is, taketh every *Beholder* by the secret power of *Proportion*: wherein let me only note this, That though the least error or offence that can be committed against *sight*, is excesse of height; yet that fault is no where of small importance, because it is the greatest offence against the *Purse*.

Symmetria is the convenience that runneth between the *Parts* and the
Whole.

Whole, whereof I have formerly spoken.

Decor is the keeping of a due *Respect* between the *Inhabitant* and the *Habitation*. Whence *Palladius* did conclude, that the principall *Entrance* was never to be regulated by any certaine *Dimensions*, but by the dignity of the *Master*; yet to exceed rather in the more, then in the lesse, is a mark of *Generosity*, and may always be excused with some noble *Emblem*, or *Inscription*, as that of the *Conte di Bevilacqua*, over his large *Gate* at *Verona*, where perchance had been committed a little *Disproportion*.

Patet Janua: Cor magis.

And here likewise I must remember our ever memorable Sir *Philip Sidney*, (whose *Wit* was in truth the very rule of *Congruity*) who well knowing that *Basilus* (as he had painted the *State* of his *Minde*) did rather want some extraordinary *Formes* to entertaine his *Fancy*, then roome for *Courtiers*; was contented to place him in a *Star-like Lodge*; which otherwise in severe *Judgment* of Art, nad been an in-

incommodious Figure.

Distributio is that usefull *Casting* of all *Roomes* for *Office*, *Entertainment*, or *Pleasure*; which I have handled before at more length then any other Piece.

These are the *Foure Heads* which every man should runne over, before he passe any determinate *Censure* upon the Works that he shall view, where-with I will close this last part, touching *Ornaments*. Against which (me thinks) I hear an *Objection*, even from some well-meaning man; That these delightfull *Crafts*, may be divers wayes ill applied in a *Land*. I must confesse indeed, there may be a *Lascivious*, and there may be likewise a *superstitious* use, both of *Picture* and of *Sculpture*: To which possibility of misapplication, not only these *Semi-liberall Arts* are subject; but even the highest perfections and *endowments* of *Nature*. As *Beauty* in a light woman; *Eloquence* in a mutinous man; *Resolution* in an *Affasinate*; *Prudent Observation* of houres and humours, in a corrupt *Courtier*; *Sharpnesse* of wit and argument
in

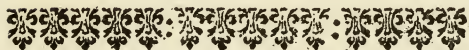
in a seducing Scholer, and the like. Nay, finally let me aske, What ART can be more pernicious, then even RELIGION it self, if it self be converted into an *Instrument* of ART: Therefore, *Ab abuti ad non uti, negatur consequentia.*

Thus having stitched in some sort together these *Animadversions* touching *Architecture*, and the *Ornaments* thereof; I now feel that *contemplative* spirits are as restlesse as *active*; for doubting with my self, (as all weaknesse is jealous) that I may be thought to have spent my poor observation abroad about nothing but *Stone* and *Timber*, and such Rubbage; I am thereby led into an immodesty of proclaiming another *Worke*, which I have long devoted to the service of my *Countrey*: Namely, A *Philosophicall Survey of Education*, which is indeed a second *Building*, or repairing of Nature, and as I may term it, a kind of *Morall Architecture*; whereof such Notes as I have taken in my forraigne trans-

transcursions or abodes, I hope to utter without publick offence, though still with the freedom of a plain *Kentish*-man. In the mean while I have let these other *Gleanings* flie abroad, like the Bird out of the *Arke*, to discover what footing may be for that which shall follow.



F I N I S.



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